

Appendix G Agency Water Conservation Plan

Amador Water Agency



Water Conservation Plan

November 2010



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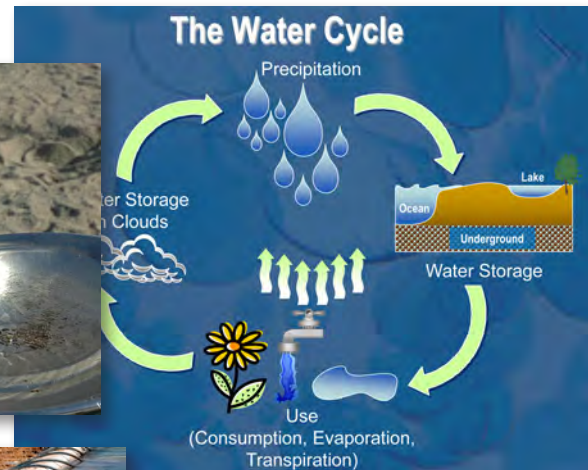
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List of Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
Agency	Amador Water Agency
ARSA	Amador Regional Sanitation Agency
AWS	Amador Water System
CAWP	Central Amador Water Project
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CII	Commercial, Industrial, and Institutional
DHS	California Department of Health Services
DMM	Demand Management Measure
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
EDU	Equivalent Dwelling Unit
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
ETo	Reference Evapotranspiration
gpd	gallons per day
gpm	gallons per minute
HEWM	High Efficiency Washing Machine
ID	Improvement District
IRWMP	Integrated Regional Water Management Plan
mgd	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric
ULFT	Ultra-Low-Flush Toilet
UWMP	Urban Water Management Plan
WSS	WaterSense Specification
WWID	Wastewater Improvement District



Introduction

Chapter 1 Introduction

Efficient use of existing water supplies is extremely important to Amador Water Agency (Agency). In reflection of this philosophy, the Agency has developed this Conservation Plan, building upon conservation strategies identified and documented in the 2005 Urban Water Management Plan (UWMP) with the intent to further extend the Agency's water resources.

Amador Water Agency is committed to maximizing available water resources and minimizing the need to obtain additional water supplies. They have done this, and will continue to do so, by utilizing water management tools and developing strategic partnerships with upstream, downstream, and nearby agencies and districts. Further, the Agency is committed to working with the public to facilitate regional water management efforts and to educate regarding the importance of water conservation. The Agency predicts that, by working with their numerous partners and implementing the programs described in this Conservation Plan, they will be able to continue managing and efficiently using their existing water supply sources through at least the year 2030.

1.1 History

Amador Water Agency was formed in 1959 for the purpose of providing water and wastewater services to the residents of Amador County. The Agency has four general service areas: the Amador Water System, the Central Amador Water Project System, La Mel Heights, and Lake Camanche Village. These service areas are shown in Figure 1-1.

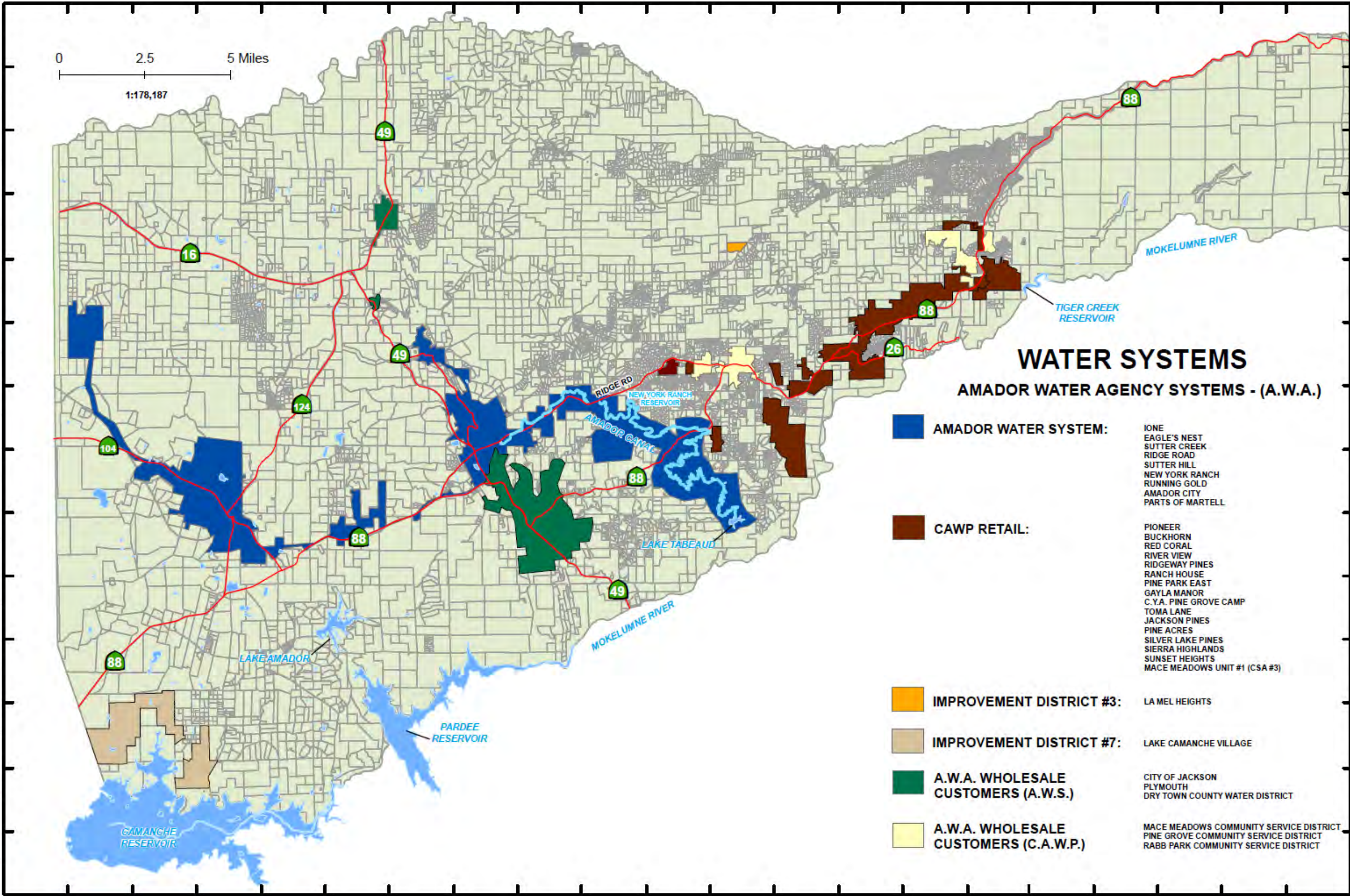
The Amador Water System (AWS) was formerly owned and operated by PG&E and currently serves the areas of Jackson, Martell, Sutter Creek, Sutter Hill, Ione, Amador City, Plymouth and Drytown. The Agency has two water treatment plants at Sutter Hill and Ione, but also serves raw (untreated) water from the Amador Canal to hundreds of customers between Lake Tabeaud and Sutter Hill, and Sutter Hill and Ione.

The Central Amador Water Project (CAWP) System provides wholesale water to the communities of First Mace Meadows Water Association, Pine Grove Community Services District (CSD), and Rabb Park CSD. The CAWP System is also used to provide retail water to Mace Meadows Unit #1 (CSA #2), Sunset Heights, Jackson Pines, C.Y.A. Pine Grove Camp, Pine Acres, Ranch House, Pioneer, Ridgeway Pines, Silver Lake Pines, Sierra Highlands, Buckhorn, Red Coral, River View, Pine Park East, Gayla Manor, and Toma Lane.

The Lake Camanche Village is a major subdivision consisting of several Units (subdivisions) in western Amador County. The Agency supplies both water and wastewater services to this area, with water supplies coming from groundwater rather than the Mokelumne River (as with the other two service areas).

In managing its service area, the Agency recognizes that water is a regional resource as well as a local one. Therefore, regional partnerships, in addition to local projects and conservation measures, play a large role in maximizing resources. The Agency currently partners with Calaveras County Water District, Amador Regional Sanitation Agency, Amador County, Calaveras County, Alpine County, East Bay Municipal Utility District (EBMUD), and the Cities of Sutter Creek, Ione, Plymouth, Amador City and Jackson as part of the Mokelumne/Amador/Calaveras (MAC) Integrated Regional Water Management Program (IRWMP). The MAC IRWMP region encompasses the Mokelumne River watershed, including Amador County as well as parts of Calaveras County. Participation in the IRWMP program allows the Agency and its partners to develop a regional plan to identify resources and develop projects to provide sustainable water resources to meet regional water needs. Amador Water Agency is also partnered with other agencies such as Calaveras-Amador Mokelumne River Authority (water and power supply) and is a partner in the Upper Mokelumne River Watershed Authority (watershed planning) and the Amador County Regional Wastewater Study (wastewater treatment and water recycling).

Figure 1-1: Amador Water Agency Water Systems



1.2 Physical Setting

The Agency's main water supply is the Mokelumne River, a snow- and rain-fed river originating in the Sierra Nevada. The Mokelumne River watershed is a relatively narrow and steep watershed located northeast of the Sacramento-San Joaquin Delta on the western slope of the Sierra Nevada. The watershed, upstream of Camanche Dam, covers an area of 627 square miles and extends from Highland Peak (elevation 10,934 feet above sea level) near the crest of the Sierra Mountains to Camanche Reservoir (elevation 235 feet above sea level) located in the lower western foothills near Clements.

Annual precipitation (rainfall and snowfall) in the Mokelumne River Watershed, and thus river runoff, is extremely variable in Northern California. Within a year, precipitation is highly seasonal with most precipitation normally occurring between November and May and very little occurring between late spring and fall. Peak flows in the Mokelumne River normally occur during winter storms or during the spring snow-melt season from March through June. River flows decrease to a minimum in late summer or fall.

Amador County has a varying range of temperature and precipitation. The Sierra Nevada foothill areas experience hot, dry summers and mild winters. The higher elevations, about 5,000 feet, experience long and severe winters accompanied by heavy snowfall. Table 1-1 shows typical reference evapotranspiration (ET_o), precipitation and temperature values.

Table 1-1: Climate

Month	Jan	Feb	Mar	Apr	May	Jun	Jul
Standard Average ET _o ^a (in.)	1.40	2.10	3.41	4.95	6.67	7.80	8.84
Average Rainfall ^b (in.)	5.48	4.49	4.93	2.59	0.96	0.32	0.11
Average Temperature ^b (deg F)	45.46	49.47	52.33	57.17	64.04	71.06	76.77

Month	Aug	Sep	Oct	Nov	Dec	Annual
Standard Average ET _o ^a (in.)	7.75	5.70	3.88	1.95	1.24	55.65
Average Rainfall ^b (in.)	0.12	0.49	1.62	3.82	4.65	29.57
Average Temperature ^b (deg F)	75.33	71.30	63.13	52.83	45.98	60.47

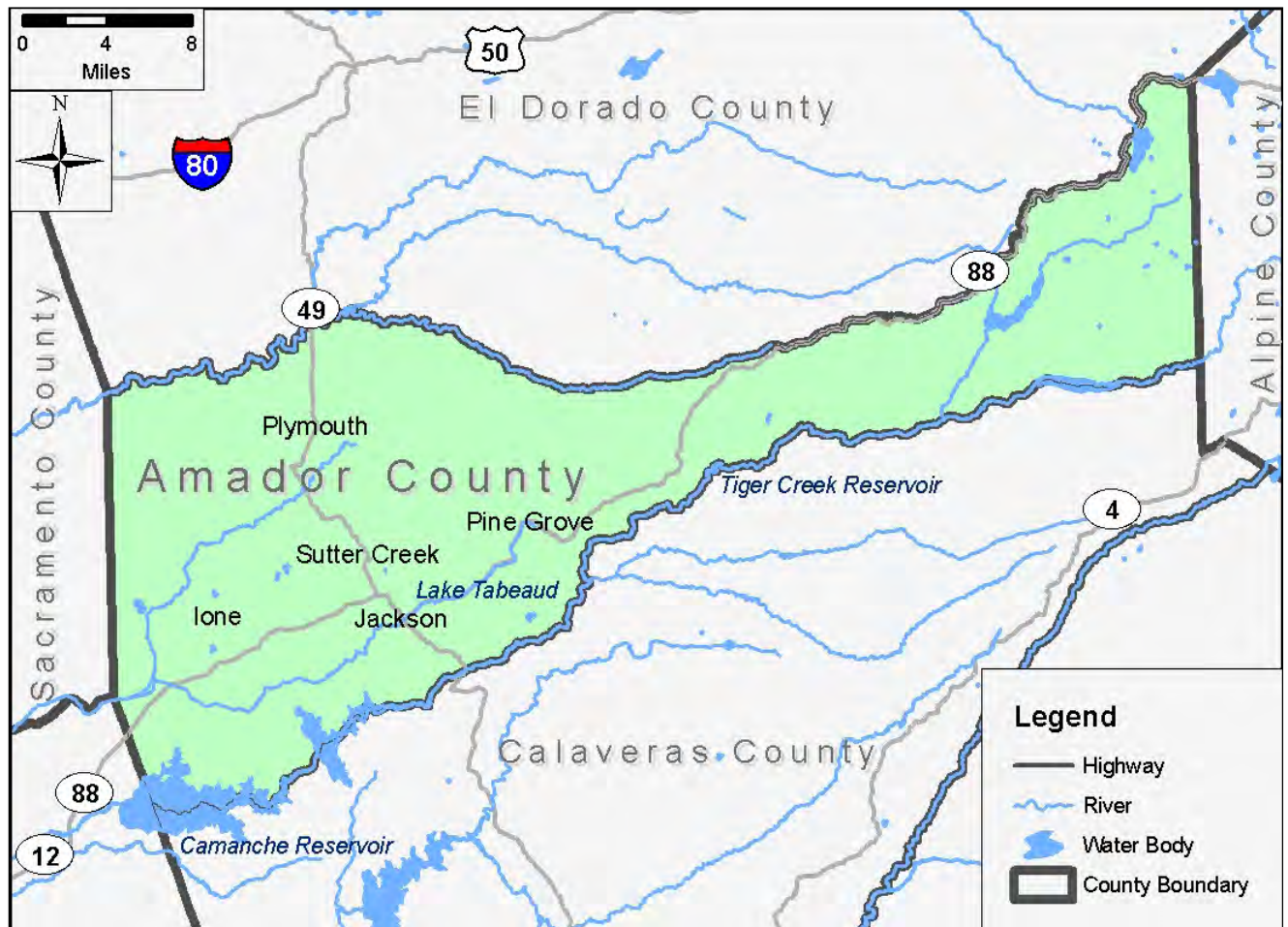
Footnotes:

- a. Source: CIMIS ET_o Map using an average of Zones 13 and 14
- b. Source: Western Regional Climate Center #042728, Electra Power House

1.3 System Description

The Agency is the main water purveyor for the western portion of Amador County. The Agency has the legal jurisdiction to serve water throughout Amador County (see Figure 1-2). The primary source of water is the Mokelumne River watershed (as described above). Rainfall and snowmelt from the Sierra Mountain Range, via the Mokelumne River, supply the Agency's main water systems: the Amador Water System (AWS) and the Central Amador Water Project (CAWP). Lake Camanche Village and La Mel Heights are served primarily through groundwater. There are a total of 6,950 service connections in the Agency's service area, not including wholesale.

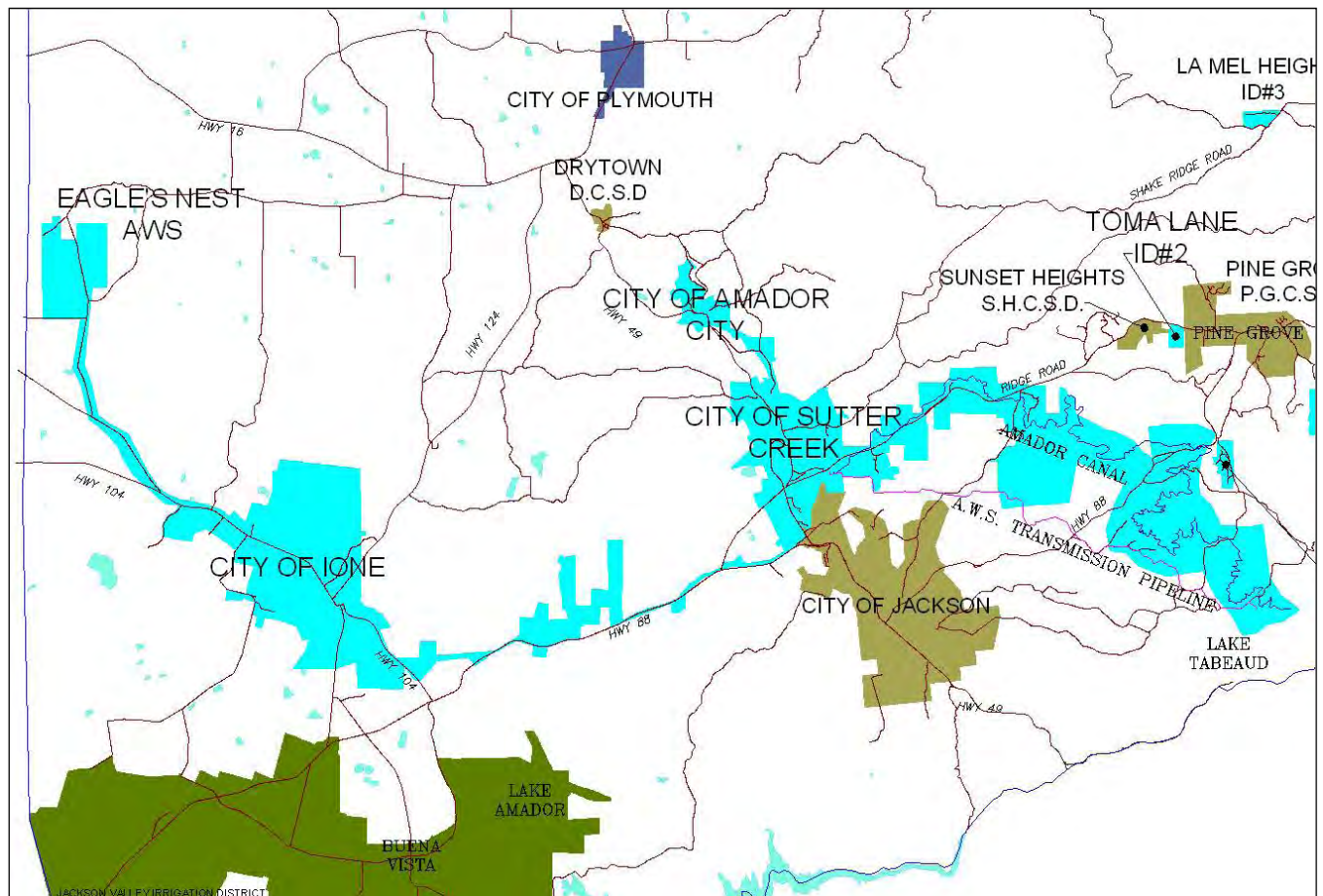
Figure 1-2: Map of Amador County



Amador Water System

The Amador Water System (AWS) receives water from the Mokelumne River via Lake Tabeaud. The AWS delivery system consists of approximately 100 miles of water main piping, and twenty three miles of conveyance canals. The Agency supplies both raw and treated water to customers in the AWS. Treated water supplied to AWS customers comes from the Ione Water Treatment Plant located in Ione or the Tanner Water Treatment Plant located in Sutter Creek. The service area covers over 450 square miles and serves the communities of Amador City, Ione, Sutter Creek, Sutter Hill and their vicinities, and portions of Ridge Road and New York Ranch Road. The Agency also provides wholesale water through the AWS to the communities of Jackson, Plymouth and Drytown. In addition, the system also supplies raw water for agricultural, industrial, commercial and domestic irrigation needs to both public facilities and individual raw water customers. There are 3,540 metered service connections in the AWS. Figure 1-3 shows the AWS service area.

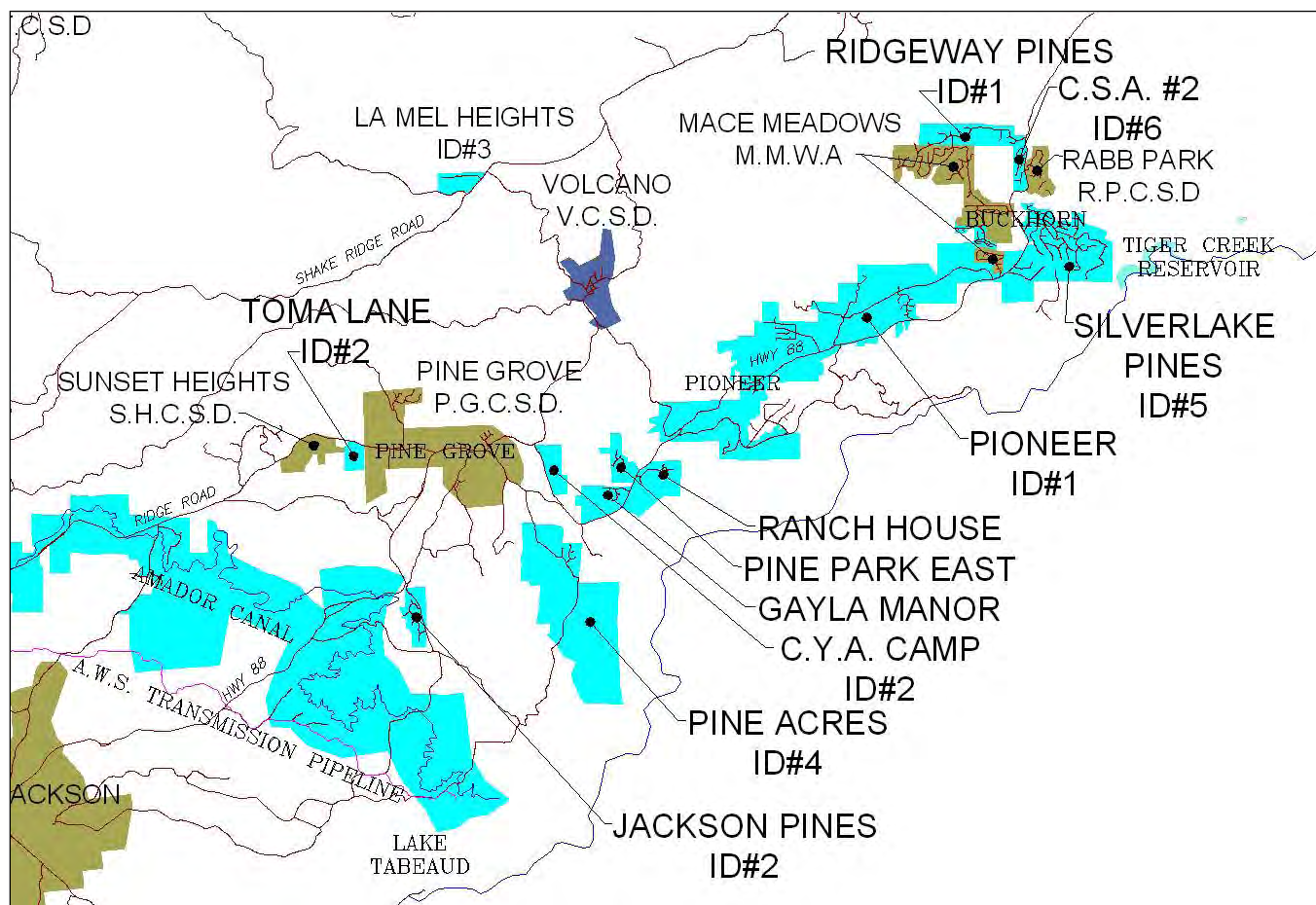
Figure 1-3: Amador Water System Service Area



Central Amador Water Project System

The Central Amador Water Project System (CAWP) receives water from the Mokelumne River via Pacific Gas and Electric (PG&E)'s Tiger Creek afterbay. Water supplied to CAWP customers is treated at the Buckhorn Water Treatment Plant located in Pioneer. The CAWP provides wholesale treated water to the upcountry communities of Mace Meadows Community Services District (CSD), Pine Grove CSD, and Rabb Park CSD. In addition to delivering wholesale water, the Agency also retails domestic water to 2,625 homes in the communities of Jackson Pines, Pine Acres, Pioneer, Ridgeway Pines, Ranch House, Silver Lake Pines, the Sunset Heights area, Buckhorn, Red Coral, River View, Pine Park east, Gayla Manor, Toma Lane, and Sierra Highlands. Figure 1-4 shows the CAWP service area.

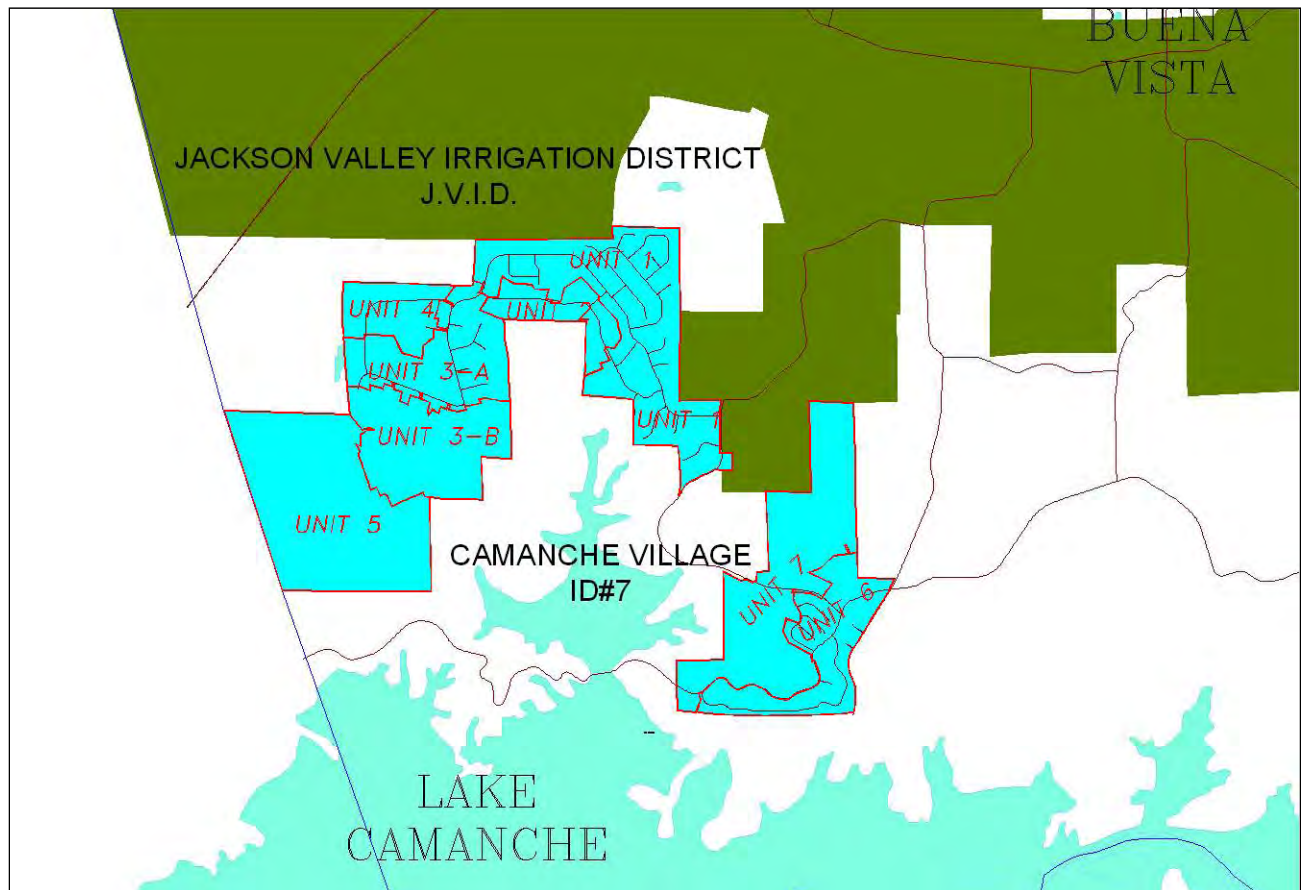
Figure 1-4: Central Amador Water Project Service Area



Lake Camanche Village Area

The Agency provides water service to about 730 homes and small commercial businesses in the Lake Camanche Village area. The domestic water supply for Lake Camanche Village is currently based on groundwater which is treated by chlorine addition at each well head located throughout the Improvement District 7 (ID #7). Figure 1-5 shows the Lake Camanche Village service area.

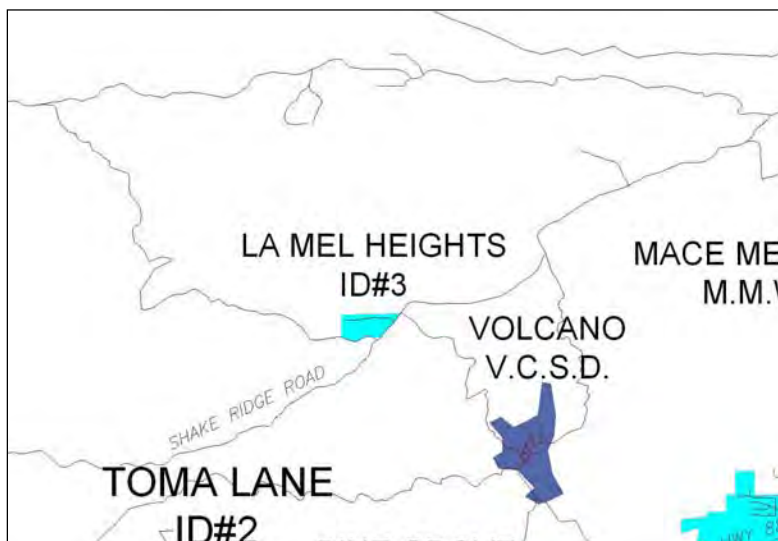
Figure 1-5: Lake Camanche Village Service Area



La Mel Heights

The Agency provides water service to La Mel Heights, a 60 unit subdivision. The only water supply is groundwater which is treated at the Improvement District 3 (ID #3) Water Treatment Plant. Figure 1-6 shows the La Mel Heights service area.

Figure 1-6: La Mel Heights Service Area



1.4 Conservation Policy

The Agency's 2005 UWMP discussed water conservation measures (referred to by the California Department of Water Resources as Demand Management Measures or DMMs) that were being implemented by the Agency. Historically, the Agency has not directly budgeted for conservation programs, but has rather folded them into the public information and maintenance budgets. The fourteen existing DMMs, as set forth in the 2005 UWMP, are described in Chapter 3.

1.5 Recent Conservation Measures

Although historically the Agency has not budgeted specifically for the implementation of DMMs and conservation measures, they have been conscience of service area water use and the principal sources of water loss. To this end, they have recently implemented some projects that have resulted in significant water savings.

Relatively high water losses have been historically attributed to the Agency's raw water ditch conveyance and delivery system, specifically the Amador Canal and Ione Canal. The new Amador Transmission Pipeline (ATP), completed in July 2007, replaced the majority of the conveyance requirement for the canal by constructing a 33-inch pipeline between Lake Tabeaud and the Tanner Reservoir. The new pipeline mitigates for water historically lost during conveyance through the Amador Canal, lowering effective system demand and allowing the Agency to more efficiently use its water entitlements. Also, by eliminating canal losses, the Agency has been able to better identify residential, commercial and industrial losses.

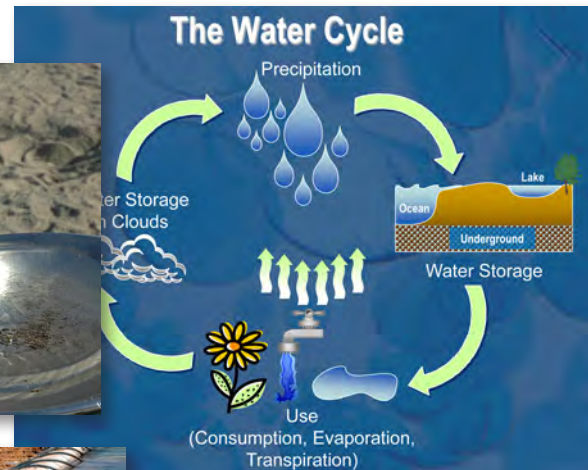
Table 1-2 below summarizes the avoided water loss achieved by the Amador Transmission Pipeline and the Service Pipelines. The new pipeline eliminates water losses associated with evapotranspiration and seepage from the open, earthen Amador and Ione Canal.

Table 1-2: Summary of Canal and Pipeline Water Balance

Delivery Method	Total Demand (AFY)	Total Diverted Supply (AFY)	Lost in Canals (AFY)	Incremental Water Saved (AFY)	Total Water Saved (AFY)
Canal Only Systems	5,702	10,269	4,567	0	0
Amador Transmission Pipeline Complete	5,702	8,374	2,672	1,895	1,895
ATP and Canals' Service Pipelines Complete	5,702	5,702	0	2,672	4,567

Source: Amador Water Agency's 2007 Water Use Efficiency Grant Application for the Amador/Ione Pipe Conversion Project

Conveyed water in the ATP satisfies a significant portion of the Amador Water System demand. There are some demands local to the Amador and Ione Canals however, that require raw water diversions from the canal. Because of this, the Agency must continue to provide water in the canal or construct a pipeline similar to the ATP, but smaller in diameter, within the canal to reach the existing customers. The Agency is currently considering constructing such a pipeline to serve these raw water customers.



Conservation Policies and Program Goals

Chapter 2 Conservation Policies and Program Goals

In preparation of this Water Conservation Plan, the Amador Water Agency Board of Directors developed the following policy statement, reflecting its belief in water conservation:

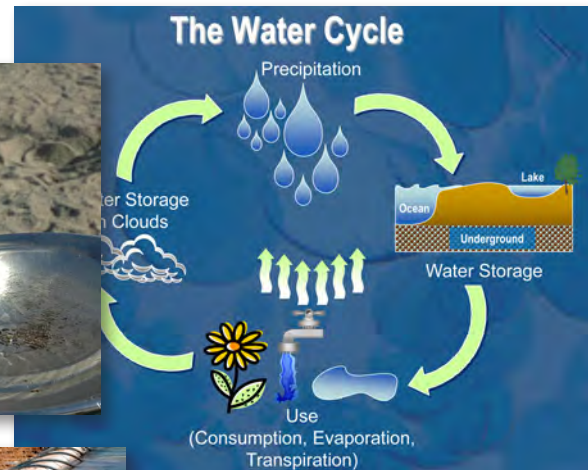
Water is a precious and limited resource essential for the public health, safety, and economic well-being of Amador County. The Amador Water Agency shall manage its water supplies to assure future availability and support other local water initiatives that achieve the same goal. Amador Water Agency will accomplish this by adopting, funding, implementing, and promoting a comprehensive program for water conservation, efficiency, quality protection and reuse.

In order to achieve this goal, the following objectives were developed for this Conservation Plan:

- To create a well informed service area where all citizens understand and value the economic, social and environmental benefits that water provides and recognize the need to conserve it;
- To allow water users to have meaningful information available to them about the amount of water they use, how to reduce their own consumption, and why they should;
- To ensure that local water resources are used wisely and reduce overall water usage within the Agency's service area;
- To prevent water supply shortages now and in the future; and
- To provide adequate water supply for public health, fire protection, and other essential services, as well as water for the economic health of Amador County.

Furthermore, with the preparation and implementation of this Plan, the Agency aims to:

1. Be compliant with Assembly Bill 1420 (AB 1420) requiring the implementation of fourteen baseline conservation measures of Best Management Practices (BMPs).
2. Meet California Urban Water Conservation Council goals as outline in the *Memorandum of Understanding Regarding Urban Water Conservation in California* for the fourteen conservation measures identified in the 2005 UWMP.
3. Create an implementation program for conservation measures based on affordability and feasibility.



Conservation Program

Chapter 3 Conservation Programs

The Agency is committed to ensuring the implementation of water conservation programs that will promote efficient use of the existing water supplies. This section discusses existing and future water conservation measures, referred to interchangeably as Best Management Practices (BMPs) or Demand Management Measures (DMMs), being implemented by the Agency.

The Agency prepared an Urban Water Management Plan (UWMP) in 2005. The UWMP discussed fourteen potential conservation programs, referred to as DMMs. The California Urban Water Conservation Council (CUWCC) adopted the 1991 *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU), outlining the same fourteen conservation programs (but calling them BMPs) to expedite implementation of reasonable water conservation measures in urban areas. The CUWCC MOU has since been amended in December of 2008. During this amendment, the BMPs were restructured into new BMP categories. This document references the original fourteen DMMs/BMPs to the extent possible in order to be consistent with the AB1420 legislation and reporting requirements.

Each of the fourteen DMMs documented in the UWMP guidelines and the AB1420 certification documents is discussed below. For each DMM, the description of the DMM, the goal for full compliance and compliance documentation required as set forth in the CUWMM MOU is presented. The CUWCC MOU requirements were used herein as measures for Agency compliance as the AB1420 legislation uses this document as its measure for State-wide compliance with the legislation.

Due to limited available funds, the Agency cannot meet the CUWCC goal for some of the DMMs within the specified period, but plans to implement each DMM to the level fiscally possible, as described in this Conservation Plan. If the Agency obtains outside funding, the conservation programs will be expanded and/or accelerated until the coverage requirements specified in the CUWCC MOU have been met. Appendix A contains the comprehensive plan that would be implemented if full funding were available and demonstrates how the programs would be expanded, given outside funding, to meet the goals set forth in the CUWCC's MOU.

3.1 DMM 1: Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers

3.1.1 CUWCC Description

This DMM is intended to provide water survey programs for both single-family and multi-family residential customers. Survey programs are to encompass both indoor and outdoor water use. Specifically, DMM 1 is to include the following.

Residential Assistance - Provide site-specific leak detection assistance that may include, but is not limited to a water conservation survey, water efficiency suggestions, and/or inspection.

Landscape Water Survey - Perform site-specific landscape water surveys that shall include, but are not limited to, the following: check irrigation system and timers for maintenance and repairs needed; estimate or measure landscaped area; develop customer irrigation schedule based on precipitation rate, local climate, irrigation system performance, and landscape conditions; review the scheduling with customer; provide information packet to customer; and provide customer with evaluation results and water savings recommendations.

3.1.2 CUWCC Documentation Requirement

Provide reports, disaggregated by single-family and multi-family units, identifying the number of:

- residential assistance/leak detection survey visits completed,
- WaterSense Specification (WSS) showerheads distributed, and

- WSS faucet aerators distributed during the reporting period.

In addition, provide the number of single-family and multi-family account landscape water surveys completed during the reporting period.

3.1.3 CUWCC Goal

Provide leak detection assistance averaging 1.5% per year of single-family accounts and 1.5% of multi-family accounts per year for the first ten years. After meeting the 10 year 15% target, maintain the program at level of high-bill complaints or not less than 0.75% per year of current single-family accounts and 0.75% per year of current multi-family accounts. The same level of compliance will be provided for landscape surveys.

3.1.4 Implementation Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.1.5 Existing AWA Program

Water surveys for residential users help raise awareness of water conservation in the home and water-saving kits conserve water during everyday use. In the past, the Agency has offered free residential water use surveys and water saving kits to customers upon request. The Agency has also provided landscape surveys when requested, including sprinkler system efficiency, distribution uniformity, seasonal scheduling and repairs or improvements. The Agency has had an informal water survey program since 1985, but has not tracked the number of surveys performed annually.

3.1.6 Future AWA Program

Herein, the Agency has formalized its program for residential water surveys, landscape water surveys, and WSS showerhead and faucet aerator distribution. Table 3-1 summarizes the estimated number of surveys to be completed over the next five years. These surveys include both indoor and outdoor investigations and suggestions for both single-family and multi-family residences. The numbers included in Table 3-1: assume residential landscape surveys will be conducted at the same time as indoor residential surveys.

Table 3-1: Projected Water Survey Program

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of single-family surveys	50	100	100	100	100
# of multi-family surveys	1	1	2	3	4
# of landscape surveys	50	100	100	100	100

Note: In FY11, the Agency will perform 10 single-family surveys, 1 multi-family survey, and 10 landscape surveys.

3.2 DMM 2: Residential Plumbing Retrofit

3.2.1 CUWCC Description

Provide site-specific leak detection to residential customers by providing plumbing retrofits, including showerheads and faucet-aerators that meet the current water efficiency standard as stipulated in the WaterSense Specifications (WSS).

3.2.2 CUWCC Documentation Requirement

Provide reports, disaggregated by single-family and multi-family units, identifying: the number of residential assistance/leak detection survey visits completed; number of WSS showerheads distributed; and number of WSS faucet aerators distributed during the reporting period.

3.2.3 CUWCC Goal

Plumbing device distribution and installation programs will be maintained at a level sufficient to distribute high quality, low-flow showerheads to not less than 10% of single-family residences and 10% of multi-family units constructed prior to 1992 each reporting period; or enactment of an enforceable ordinance requiring the replacement of high-flow showerheads and other use fixtures with their low-flow counterparts. Continue until coverage includes 75% of single family and multi-family units.

3.2.4 AWA Status

The Agency has not yet implemented this DMM.

3.2.5 Existing AWA Program

The Agency encourages its customers to conserve water during everyday use, but has not yet implemented a formal program to provide plumbing retrofits to users.

3.2.6 Future AWA Program

Implementation of this DMM will be combined with DMM 8, school education. As part of the school education programs discussed in DMM 8, the Agency will distribute low-flow showerheads to the fifth-grade classes targeted for presentations each year. Under this program, the Agency will distribute approximately 300 WSS showerheads each year. To evaluate the effectiveness of the school education program, the Agency will track the number of phone calls from parents/guardians requesting more information on conservation programs and/or the low-flow showerheads after the fifth-grade programs are held. The Agency may also compare water use at homes before and after the distribution of the WSS showerheads and other water saving devices. The number of showerheads distributed can be adjusted as necessary.

In addition to providing low-flow showerheads to the 5th grade classes under DMM 8, the Agency will either distribute additional low-flow showerheads as giveaways at other public events and/or provide a predetermined number of rebates for low-flow showerheads each year. The latter is assumed for purposes of future planning. Table 3-2 summarizes the total number of planned low-flow showerhead rebates provided for residential plumbing retrofits (in lieu of give-aways) each fiscal year.

Table 3-2: Planned Residential Plumbing Retrofits

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# showerhead rebates	195	389	389	389	389
AFY savings showerheads	2.7	5.4	5.4	5.4	5.4

Notes:

1. Rebates for low-flow toilets will not be included in DMM 2, as DMM 14 is devoted solely to providing WSS Toilets.
2. This DMM is not budgeted for in FY11.

3.3 DMM 3: System Water Audits, Leak Detection, and Repair

3.3.1 CUWCC Description

Per the CUWCC program, implementation of DMM 3 shall consist of at least the following actions:

1. Annually complete a pre-screening system audit to determine the need for a full-scale system-wide water audit. The pre-screening system audit shall be calculated as follows:
 - a. Determine metered sales;
 - b. Determine other system verifiable uses;

- c. Determine total supply into the system;
 - d. Divide metered sales plus other verifiable uses by total supply into the system. If this quantity is less than 0.9, a full scale system audit is indicated.
2. When indicated, agencies shall complete water audits of their distribution systems using methodology consistent with that described in AWWA's Water Audit and Leak Detection Guidebook.
3. Agencies shall advise customers whenever it appears possible that leaks exist on the customer's side of the meter; perform distribution system leak detection when warranted and cost-effective; and repair leaks when found.

3.3.2 CUWCC Documentation Requirement

Documentation required in support of this DMM includes pre-screening audit results and supporting documentation, and in-house records of audit results or the completed AWWA Audit Worksheets for each completed audit period.

3.3.3 CUWCC Goal

Complete one pre-screening audit per year.

3.3.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.3.5 Existing AWA Program

Repair and maintenance of the water distribution systems are priorities for the Agency and the Agency has conducted system water audits since its founding. On a small scale, the Agency contacts individual customers when meter readings indicate unusually high usage. The Agency will then work with the owner to determine if a leak may have developed. System audits are also performed on a larger scale.

Records are kept annually on water production versus consumption to track unaccounted water in the system. As previously described, the Agency installed the Amador Transmission Pipeline, replacing the earthen Amador and Ione Canal, ultimately reducing the system leaks and high water losses. The new pipeline mitigates for water historically lost during conveyance through the Amador Canal, lowering effective system demand and allowing the Agency to more efficiently use its water entitlements. Also, by eliminating canal losses, the Agency has been able to better identify residential, commercial and industrial losses.

3.3.6 Future AWA Program

As required by DMM 3, the Agency will conduct an annual pre-screening audit of their entire distribution system. If indicated by the pre-screening audit, a system-wide detailed water audit will be performed. For the purposes of budgeting for this DMM, it was assumed that a detailed water audit will be conducted every five years.

There is potential for the Agency to coordinate a joint leak detection and pipe repair program with its southern neighbor, the Calaveras County Water District. This would be implemented through the regional umbrella organization, the Upper Mokelumne River Watershed Authority, and could potentially achieve cost savings through a shared program.

3.4 DMM 4: Metering with Commodity Rates for All New Connections and Retrofit for Existing Connections

3.4.1 CUWCC Description

Implementation of this DMM shall consist of at least the following actions:

1. Require meters for all new service connections.
2. Establish a program for retrofitting existing unmetered service connections.
3. Read meters and bill customers by volume of use.
 - Establish and maintain billing intervals that are no greater than bi-monthly (every two months) for all customers.
 - For each metered connection, perform at least five actual meter readings (including remotely sensed) per twelve month period.
4. Prepare a written plan, policy or program that includes:
 - A census of all meters, by size, type, year installed, customer class served and manufacturer's warranty accuracy when new;
 - A currently approved schedule of meter testing and repair, by size, type and customer class;
 - A currently approved schedule of meter replacement, by size, type, and customer class; and
5. Identify intra- and inter-agency disincentives or barriers to retrofitting mixed use commercial accounts with dedicated landscape meters, and conducting a feasibility study(s) to assess the merits of a program to provide incentives to switch mixed use accounts to dedicated landscape meters.

Service lines dedicated to fire suppression systems are exempt from this requirement.

3.4.2 CUWCC Documentation Requirement

Documentation required for compliance with the CUWCC MOU is as follows:

- Confirmation that all new service connections are metered and are being billed by volume of use and provide:
 - Number of metered accounts;
 - Number of metered accounts read;
 - Number of metered accounts billed by volume of use;
 - Frequency of billing (i.e. six or twelve times per year) by type of metered customer (e.g. single-family residential, multiple-family residential, commercial, industrial, and landscape irrigation); and
 - Number of estimated bills per year by type of metered customer (e.g. single-family residential, multiple-family residential, commercial, industrial, and landscape irrigation) vs. actual meter readings.
- Number of unmetered accounts in the service area. For the purposes of evaluation, this shall be defined as the baseline meter retrofit target, and shall be used to calculate the agency's minimum annual retrofit requirement.
- Number of unmetered service connections retrofitted during the reporting period.
- Estimated number of CII accounts with mixed-use meters.
- Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period.

3.4.3 CUWCC Goal

Meter 100% of existing unmetered accounts and bill by volume, including:

1. Initiating volumetric billing for all metered customers within one year.
2. Complete meter installation for all service connections within 6 years.
3. For unmetered service areas newly acquired or newly operated by otherwise metered agencies, meter installation shall be completed in these service areas within 6 years of the acquisition or operational agreement.
4. A feasibility study examining incentive programs to move landscape water uses on mixed-use meters to dedicated landscape meters to be completed by the end of Year Four.
5. A written plan, policy or program to test, repair and replace meters shall be completed and submitted electronically within one year.

3.4.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.4.5 Existing AWA Program

The Agency's treated water systems are not fully metered. The Agency has historically converted services from flat rate to metered service upon transfer of ownership. There are still approximately 27 residential, commercial and raw customers requiring metering, and approximately 153 accounts yet to be converted from flat rate to volumetric billing. As these properties transfer ownership, they are required to convert to metered service. Meters are installed with every new connection made to an Agency water system, whether treated or untreated, at the time that the service connection is installed.

3.4.6 Future AWA Program

Table 3-3 summarizes the planned commodity rate metering and retrofits for the next five fiscal years.

Table 3-3: Planned Commodity Rate Metering and Retrofits

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of meter conversions	20	0	0	0	0
# of accounts from flat to volumetric use	153	0	0	0	0

Note: In FY11, the Agency will convert 7 unmetered accounts to metered.

3.5 DMM 5: Large Landscape Conservation Programs and Incentives

3.5.1 CUWCC Description

Under DMM 5, the Agency will provide support and incentives to improve non-residential customers' landscape water use efficiency. Support shall include:

1. Accounts with dedicated irrigation meters:
 - Identify accounts with dedicated meters and assign ETo-based water use budgets equal to no more than an average of 70% of ETo of annual average local ETo per square foot of landscape area.
 - Provide notices each billing cycle to accounts with water budget showing the relationship between the budget and actual consumption.
 - Offer site-specific technical assistance to reduce water use to accounts that are 20% over budget.

2. Commercial, industrial, and institutional (CII) accounts without meters or with mixed-use meters
 - Develop and implement strategy targeting large landscape water use surveys to CII accounts with mixed-use meters.
 - In un-metered service areas, actively market landscape surveys to existing accounts with large landscapes or accounts with landscapes that are not water efficient.
3. Offer financial incentives.

3.5.2 CUWCC Documentation Requirement:

Under this DMM, the Agency shall preserve water use records and budgets for customers with dedicated landscape irrigation accounts for at last four years. In addition, the following information will be preserved for CII accounts without meters or with mixed-use meters:

- Number of accounts
- Number, type, dollar value of incentives, rebates, and no- or low-interest loans offered to, and received by, customers
- Number of surveys offered
- Number of surveys accepted
- Estimated annual water savings by customers receiving surveys and implementing

3.5.3 CUWCC Goal

Per the CUWCC MOU (set by AB1420 as the standard for DMM compliance), the goals for DMM 5 are as follows:

- At least 90% of all dedicated meters and 15% of all mixed-use and non-metered accounts will receive assistance over a ten year period.
- Develop ETo-based water use budget for 9% of all dedicated accounts per year over 10 years.
- Offer site specific technical assistance annually to accounts that are 20% over their budget within 6 years of the date implementation was to commence.

3.5.4 AWA Status

The Agency has not yet implemented this DMM.

3.5.5 Existing AWA Program

The Agency has approximately 30 accounts dedicated solely to large landscape irrigation. These accounts are mostly local parks and cemeteries. The Agency has offered surveys to large landscape accounts, along with all commercial, industrial, and institutional accounts since 1985 as an informal service; however, as the service was informal, no historic records have been kept.

3.5.6 Future AWA Program

The Agency will begin a program to formally offer surveys to large landscape accounts. Under this program, the Agency will visit customers who irrigate and recommend an efficient irrigation schedule and improvements. The Agency will provide each dedicated irrigation account with an ETo-based water use budgets equal to no more than an average of 70% of ETo of annual average local ETo per square foot of landscape area. The recreational areas, like parks, may require additional water than allotted in the budget, but their use still may not exceed 100% of ETo on an annual basis. To aid the customer in tracking their water use, the Agency will provide notices each billing cycle to the accounts with water use budgets showing the relationship between the budget and their actual consumption. The Agency will offer technical assistance to customers that are 20% over budget. Surveys will also be provided to commercial, industrial and institutional accounts without meters or with mixed-use meters. Finally, the

Agency will implement a weather based irrigation controller (WBIC) rebate program, offering \$50/WBIC.

Table 3-4 summarizes the projected number of the large landscape surveys and rebates to be offered to customers under this DMM. Also shown below is the projected water savings resulting from the program implementation.

Table 3-4: Planned Large Landscape Conservation Programs

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of budgets created	2	3	3	3	3
# of surveys completed	4	6	6	6	6
# of follow-up visits	2	3	3	3	3
# of rebates	1	2	2	2	2
Projected Water Savings- AFY	3.9	5.3	5.3	5.3	5.3

Note: This DMM is not budgeted for in FY11.

3.6 DMM 6: High-Efficiency Clothes Washers

3.6.1 CUWCC Description

DMM 6 is implemented to provide incentives or establish ordinances requiring the purchase of high-efficiency clothes washing machines (HECWs) that meet an average water factor value of 5.0. If the WaterSense Specification (WSS) is less than 5.0, then the average water factor value will decrease by that amount. WaterSense is a partnership program sponsored by the U.S. Environmental Protection Agency (EPA) which makes it easier for Americans to save water by purchasing water-efficient products. Consumers can look for products with the WaterSense label to choose quality, water-efficient products. More information about WSS can be found at <http://www.epa.gov/watersense/index.htm>.

A water factor is the number of gallons per cycle per cubic foot that the clothes washer uses. The lower the water factor, the more efficient the machine is. For example, if a washer uses 30 gallons per cycle and has a tub volume of 3.0 cubic feet, then the water factor is 10.

3.6.2 CUWCC Documentation Requirement

Documentation required for DMM 6 includes the number of installations credited to the Agency's replacement program for HECWs with an average water factor value of 5.0. If the WSS is less than 5.0, then the water factor value will decrease to that amount.

3.6.3 CUWCC Goal

Incentives shall be provided to 0.9% of current single-family accounts during the first reporting period following implementation, rising to 1% per year for the remainder of a ten year period.

3.6.4 AWA Status

The Agency has not yet implemented this DMM.

3.6.5 Existing AWA Program

The Agency has not yet implemented this DMM.

3.6.6 Future AWA Program

Under the plans for implementing DMM 6, the Agency will initially offer a rebate program to customers residing in the Wastewater Improvement District #11 (WWID #11) which serves the Lake Camanche Village area. Wastewater disposal had become a concern in the Lake Camanche Village. Being able to

reduce the quantity of wastewater produced in Lake Camanche Village by reducing water use was determined to be an effective method to counterbalance continued growth. Initially, a rebate of \$75 will be offered. After the first year, the program can be adjusted and/or expanded to other customers throughout the County.

Table 3-5 summarizes program implementation and water savings. The Agency will also require all new residential development utilize HECWs.

Table 3-5: HECWs Rebate Program

Planned	FY12	FY13	FY14	FY15	FY16
# of rebates (\$75 each)	35	70	70	70	70
Projected Water Savings (AFY) ^a	0.9	1.7	1.7	1.7	1.7

Notes:

1. Assuming 400 loads/household/year with non-conserving washing machines using 40 gal/load and HECWs using 20 gal/load.
2. This DMM is not budgeted for in FY11.

3.7 DMM 7: Public Education Programs

3.7.1 CUWCC Description

Public information programs shall be implemented to promote water conservation and water conservation-related benefits. Implementation shall consist of at least the following actions:

1. The program should include, when possible, but is not limited to, providing speakers to employees, community groups and the media; using paid and public service advertising; using bill inserts; providing information on customers' bills showing use for the last billing period compared to the same period the year before; providing public information to promote water conservation measures; and coordinating with other government agencies, industry groups, public interest groups, and the media.
2. The program should include, when possible, social marketing elements which are designed to change attitudes to influence behavior. This includes seeking input from the public to shape the water conservation message; training stakeholders outside the utility staff in water conservation priorities and techniques; and developing partnerships with stakeholders who carry the conservation message to their target markets.
3. When mutually agreeable and beneficial, the wholesale agency or another lead regional agency may operate all or part of the public information program. If the wholesale agency operates the entire program, then it may, by mutual consent with the retail agency, assume responsibility for CUWCC reporting for this BMP. Under this arrangement, a wholesale agency may aggregate all or portions of the reporting and coverage requirements of the retail agencies joining into the mutual consent.

3.7.2 CUWCC Documentation Requirement

Agencies may report on all of the following activities, although agencies are only expected to meet the minimum requirements described above:

1. Newsletter articles on conservation
2. Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
3. Landscape water conservation media campaigns
4. General water conservation information

5. Website
6. Email messages
7. Website - provide link to or list of qualified landscape professionals (WaterSense, California Landscape Contractors Association, Irrigation Association, etc.) and other helpful sites
8. Direct mail - seasonal postcards noting irrigation requirement changes
9. Direct mail or other notification to customer if water use is significantly higher than neighbors with similarly-sized lots
10. Customer notification when neighbor reports runoff or runoff is noticed by employees or meter reads show rise in use of 20% or more from same time previous year
11. Dedicated phone line or “on hold” messages with recorded conservation information
12. Booths at local fairs/events
13. Monthly water use reports provided with comparison of water use to water budget
14. Presentations
15. Point of purchase pieces, including internet point of purchase by type: high-efficiency clothes washers, weather based irrigation controller, high-efficiency toilets, plant palette information, other.
16. Media outreach: news releases, editorial board visits, written editorials, newspaper contacts, television contacts, radio contacts, articles or stories resulting from outreach. Provide names of local media markets: newspaper, TV stations, radio stations reached via media outreach program during the reporting period
17. Adult Education/Training Programs: Topic(s), number of presentations, number of attendees
18. Water Conservation Gardens: involvement in a garden that promotes and educates the public about water-efficient landscaping and conservation techniques. May include “Corporate” or “business” sponsorship or membership.
19. Sponsor or co-sponsor landscape workshops/training for homeowners and/or homeowners associations: number of presentations; number in attendance
20. Landscape watering calculator and watering index to assist with weekly irrigation scheduling
21. Additional program(s) supported by agency but not mentioned above
22. Total reporting period budget expenditure for public outreach/training/adult education programs (include all agency costs)

3.7.3 CUWCC Goal

At the minimum, a public information program shall consist of the following components:

1. Contacts with the public at least four times per year
2. Water supplier contacts with media at least four times per year
3. An actively maintained website that is updated at least four times per year
4. Description of materials used to meet minimum requirement
5. Annual budget for public outreach program

3.7.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.7.5 Existing AWA Program

The Agency believes public awareness of water conservation issues is an important factor in ensuring a reliable water supply. The Agency promotes public awareness of water conservation through many ways. These methods include bill inserts, brochures, a demonstration garden, and special events throughout the year, and water conservation programs sponsored in local schools. The Agency has had public information programs since 1985, but has not historically tracked information. Appendix B displays samples of public information distributed by Amador Water Agency.

3.7.6 Future AWA Program

To evaluate the effectiveness of their public information programs, the Agency may survey a sampling of customers to determine what percentage of their customers identifies their public information efforts.

The Agency will continue to implement public outreach strategies, but track them in a more organized fashion. The Agency plans to conduct public presentations and demonstrations, provide a presence at local fairs and events, provide media releases, provide monthly bill inserts, and keep a conservation webpage. The number of each planned activity per fiscal year is shown in Table 3-6.

Table 3-6: Planned Public Education Programs

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
Public Presentations/Demos	4	4	4	4	4
Contacts with Media	4	4	4	4	4
Bill Messages	6	6	6	6	6
Update website	4	4	4	4	4

3.8 DMM 8: School Education Programs

3.8.1 CUWCC Description

School education programs are implemented to reach the youngest water users at an early age and enforce the need to engage in water conservation as a life-long behavior. Implementation shall consist of at least the following actions:

1. Implement a school education program to promote water conservation and water conservation-related benefits.
2. Programs shall include working with school districts and private schools in the water suppliers' service area to provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Educational materials shall meet the state education framework requirements and grade-appropriate materials shall be distributed.
3. When mutually agreeable and beneficial, the wholesale agency or another lead regional agency will operate all or part of the education program; if the wholesale agency operates all or part of the retail agency's school education program, then it may, by mutual consent with the retail agency, assume responsibility for CUWCC reporting of this BMP; under this arrangement, a wholesale agency may aggregate all or portions of the reporting and coverage requirements of the retail agencies joining into the mutual consent.

The Agency shall maintain an active school education program to educate students in the agency's service area about water conservation and efficient water use. An agency may participate in a mutual arrangement as described above.

3.8.2 CUWCC Documentation Requirement

Agencies may report on all of the following activities, although they are only expected to meet the minimum requirements described above:

1. Classroom presentations: number of presentations, number of attendees, topics covered: conservation, recycled water, water sources, pollution prevention, etc.
2. Large group assemblies: number of presentations, number of attendees
3. Children's water festivals or other events: number of presentations, number of attendees
4. Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up: number of presentations, number of attendees
5. Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits); Description; number distributed
6. Staffing children's booths at events & festivals: number of booths, number of attendees
7. Water conservation contests such as poster and photo; Description; number of participants
8. Offer monetary awards/funding or scholarships to students: number offered; total funding
9. Teacher training workshops: number of presentations, number of attendees
10. Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.: number of tours or field trips, number of participants
11. College internships in water conservation offered: number of internships; total funding
12. Career fairs/workshops: number of presentations, number of attendees
13. Additional program(s) supported by agency but not mentioned above; Description; number of events (if applicable); number of participants
14. Total reporting period budget expenditures for school education programs (include all agency costs)

3.8.3 CUWCC Goal

The following are the goals for obtaining compliance with this DMM:

1. Curriculum materials developed and/or provided by agency (including confirmation that materials meet state education framework requirements and are grade-level appropriate).
2. Materials distributed to K-6 students. When possible, school education programs will reach grades 7-12 as well.
3. Description of materials used to meet minimum requirement.
4. Annual budget for school education program.
5. Description of all other water supplier education programs.

3.8.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.8.5 AWA Existing Program

In the past, the Agency has provided school education programs, including presentations and demonstrations, on a per request basis. Educational materials and videos for this program are provided by the Agency and include water-themed coloring books and conservation tips from “Aqua Annie.” To appeal to younger children, a duck costume is available for a staff member to wear to the presentations as Aqua Annie. Appendix C contains examples of materials used for school education programs.

3.8.6 AWA Future Program

The Agency will formalize its school education program, focusing on outreach to fifth graders (the age best identified for reaching children and instilling the importance of water conservation). Specifically, the Agency will visit all fifth grade classes in their service area, giving a presentation that covers the agency’s role in supplying water, the importance of managing water resources and water conservation tips. Each fifth grader will be given a low-flow showerhead to install in their own homes with their parents’ permission. The effectiveness of school programs will be evaluated as part of the plumbing retrofit evaluations described in DMM 1. Table 3-7 summarizes the planned school education presentations to all fifth grade classes and the estimated water savings that may result from the low-flow showerhead distribution.

Table 3-7: Planned School Education Presentations

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of giveaways	156	311	311	311	311
# presentations	3	6	6	6	6
total water savings	2.2	4.4	4.4	4.4	4.4

Note: In FY11, the Agency will give 2 presentations; giveaways will begin in FY12.

3.9 DMM 9: Commercial, Industrial, and Institutional

3.9.1 CUWCC Description

Commercial, industrial, and institutional (CII) water use varies dramatically between business sectors and location. This DMM includes implementing measures to achieve a water savings. Potential measures include, but are not limited to:

- Industrial process water use reduction
- Industrial laundry retrofits
- Car wash recycling systems
- Water efficient commercial dishwashers
- Wet cleaning

3.9.2 CUWCC Documentation Requirement

The Agency shall report the measure type and quantity installed, as well as water savings attributed to water shortage measures, intervention and actions.

3.9.3 CUWCC Goal

The CUWCC goal is to save 10% of baseline CII water use over a 10-year period by reducing water use as follows:

- 0.5% by end of first reporting period (i.e. year 2)
- 2.4% by the end of year 4
- 4.3% by the end of year 6
- 6.4% by the end of year 8
- 9% by the end of year 10

Table 3-8: Demonstrated CII Water Savings¹

Measure	Annual Savings (AF)	Measure Life (years)
HE Toilets	0.041748	25
HE Urinals	0.069086	25
Ultra Low Volume Urinals	0.080603	25
Zero Consumption Urinals	0.0921146	25
Commercial HE Single Load Clothes Washers	0.116618	10
Cooling Tower Conductivity Controllers	1.032250	5
Cooling Tower pH Controllers	3.981543	5
Connectionless Food Steamers	Per Steamer Compartment – 0.25	10
Medical Equipment Steam Sterilizers	1.538	20
Water-Efficient Ice Machines	0.834507	10
Pressurized Water Brooms	0.1534	5
Dry Vacuum Pumps	0.64	7

Source: CUWCC MOU Regarding Urban Water Conservation (December 2008)

3.9.4 AWA Status

The Agency has not yet implemented this DMM.

3.9.5 Existing AWA Program

Historically, the Agency has offered to review plans for new CII customers. The Agency has provided water use audits to any CII customer upon request since 1985 as an informal service; therefore, historical records have not been kept.

3.9.6 Future AWA Program

Currently, the Agency has about 389 CII accounts of which about 95 percent are mixed-use accounts. There is also one unmetered commercial account which will be retrofitted with a meter under DMM 4. The Agency will recognize a formal survey program for CII accounts which will include free water use surveys (upon request) and evaluations of water using apparatus and processes, and recommended efficiency measures. Table 3-9 summarizes the projected CII conservation program. Rebates will be provided for some water saving devices such as those included in Table 3-10. This DMM would not satisfy the level of coverage as described in the CUWCC. If additional funding were made available, the Agency could expand the program and provide additional surveys, rebates, and follow-up visits.

Table 3-9: Estimated CII Programs

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of on-site surveys	10	15	15	20	30
# of rebates provided	5	10	10	10	10
# of follow-up visits	3	5	5	5	5
Projected water savings - AFY	2	3	3	4	6

Note: This DMM is not budgeted for in FY11.

Table 3-10: Agency CII Rebates

Device	Incentive Amount
WSS Toilets	\$50
Urinal	\$50
HECW	\$75
Water Broom	\$100
Cooling Tower Controller	\$500

3.10 DMM 10: Wholesale Agency Programs

3.10.1 CUWCC Description

This DMM addresses the assistance relationships between regional wholesale agencies and intermediate wholesale agencies as well as between wholesale agencies and retail agencies. These relationships are applied in the following way:

1. Financial investments and building partnerships

When mutually agreeable and beneficial to a wholesaler and its retail agencies, a wholesaler will provide financial assistance and help build partnerships to accomplish conservation. Wholesale water suppliers will consider avoided capital costs when making financial investments and build regional partnerships to advance water conservation efforts and effectiveness. Where applicable, intermediate wholesale water suppliers that receive conservation-related financial incentives from regional wholesalers will pass through eligible financial incentives to retail agencies operating programs at the retail level.

2. Technical support

When requested, wholesale water agencies will provide conservation-related technical support and information to retail agencies they serve. Support and information will include, but will not be limited to: workshops and support advice addressing conservation program planning, design, implementation, and evaluation.

3. Program management

When mutually advantageous, wholesale and retail water agencies will join together to plan, design, implement, manage, and evaluate regional conservation programs.

When mutually agreeable and beneficial, the wholesale agency or another lead regional agency will operate all or part of the conservation program; if the wholesale agency or other lead regional

agency operates all or part of a program, then it may, by mutual consent with the retail agency, assume responsibility for CUWCC reporting for funded BMPs; under this arrangement, a wholesale agency or other lead regional agency may aggregate all or portions of the reporting and coverage requirements of all retail agencies joining into the mutual consent.

4. Water shortage allocations

Wholesale agencies shall pursue water shortage allocation policies or plans which minimize disincentives to long-term water conservation, and encourage and reward investments in long-term conservation shown to advance regional water supply reliability and sufficiency.

5. Non-signatory reporting

To the extent possible, wholesale water agencies will provide reports on BMP implementation within their service area by retail water agencies that are not signatories to the MOU.

6. Encourage CUWCC membership

Wholesale agencies will encourage all of their retail agencies to become MOU signatories, provide information to assist the CUWCC in recruitment targeting, and may assist in paying CUWCC dues for their retail agencies.

3.10.2 CUWCC Documentation Requirement

The following documentation is considered acceptable under this DMM:

- Financial investments and building partnerships: List the total monetary amount of financial incentives and equivalent resources provided to retail members to assist with, or to otherwise support, implementation of BMPs, subtotaled by BMP. List regional partnerships developed to encourage resource conservation and maximize economies of scale benefits.
- Technical support: Supply a summary of types of technical support provided to retail agencies.
- Program management: If the wholesale agency has assumed reporting responsibility, list the programs managed on behalf of its retail agencies.
- Water shortage allocation: If a water shortage allocation plan or policy has been developed, provide the date of adoption and electronic link to the document or hard copy.
- Non-signatory reporting: Receipt of reports.
- Encourage CUWCC membership: List of efforts to recruit retailers and amount of dues paid on behalf of retail agencies.

3.10.3 CUWCC Goal

Provide financial and managerial assistance to retail agencies for implementation of BMPs in the Agency's service area.

3.10.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.10.5 Existing AWA Program

The Agency has offered the same demand management programs and services to its wholesale customers as it does to its retail customers since 1980. The Agency wholesales water to six communities: Jackson, Plymouth, Drytown CSD, Pine Grove CSD, Rabb Park CSD, and Mace Meadows. Because the Agency's wholesale customers are provided the same demand management programs and services as retail customers, the wholesale program results have not been tracked or allocated separately.

3.10.6 Future AWA Program

To successfully implement the DMM, the Agency will extend its survey and rebate programs to include the service areas of its retailers. Table 3-11 documents the additional surveys and rebates that will be

offered to the Agency's wholesale areas. In addition to the surveys and rebates shown below, the Agency will offer program management assistance to its retailers and will initiate discussions regarding agreements for conservation planning implementation.

Table 3-11: Planned Assistance to Retail Agencies

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of Surveys	5	10	10	10	10
# of Water Budgets	1	2	2	2	2
# of Residential Rebates	5	10	10	10	10
# of Industrial Rebates	3	6	6	6	6

Note: This DMM is not budgeted for in FY11.

3.11 DMM 11: Retail Conservation Pricing

3.11.1 CUWCC Description

DMM 11 promotes water conserving retail water rate structures. This DMM recognizes that each agency or water enterprise fund has a unique rate setting system and history. When creating a rate case, professional judgments are made to determine whether costs are accounted to a variable or fixed cost center by the staff of the agency. The final water rate case is an accumulation of all the decisions and judgments made by staff and supplemented by the financial projections leading an agency to establish its final water rate recommendation. DMM 11 is not intended to supplant this process, but rather to reinforce the need to establish a strong nexus between volume-related system costs and volumetric commodity rates.

DMM 11 also applies to retail sewer service. Conservation pricing of sewer service provides incentives to reduce average or peak use, or both. Such pricing includes: rates designed to recover the cost of providing service, and billing for sewer service based on metered water use. Conservation pricing of sewer service is also characterized by one or more of the following components: rates in which the unit rate is the same across all units of service (uniform rates); rates in which the unit rate increases as the quantity of units purchased increases (increasing block rates); rates in which the unit rate is based upon the long-run marginal cost or the cost of adding the next unit of capacity to the sewer system. Rates that charge customers a fixed amount per billing cycle for sewer service regardless of the units of service consumed do not satisfy the definition of conservation pricing of sewer service. Rates in which the typical bill is determined by high fixed charges and low commodity charges also do not satisfy the definition of conservation pricing of sewer service.

Conservation pricing requires volumetric rates. While this DMM defines a minimum percentage of water sales revenue from volumetric rates, the goal of this DMM is to recover the maximum amount of water sales revenue from volumetric rates that is consistent with utility costs (which may include utility long-run marginal costs), financial stability, revenue sufficiency, and customer equity. In addition to volumetric rates, conservation pricing may also include one or more of the following other charges:

1. Service connection charges designed to recover the separable costs of adding new customers to the water distribution system.
2. Monthly or bimonthly meter/service charges to recover costs unrelated to the volume of water delivered or new service connections and to ensure system revenue sufficiency.
3. Special rates and charges for temporary service, fire protection service, and other irregular services provided by the utility.

The following volumetric rate designs are potentially consistent with the above definition:

1. Uniform rate in which the volumetric rate is constant regardless of the quantity consumed.
2. Seasonal rates in which the volumetric rate reflects seasonal variation in water delivery costs.
3. Tiered rates in which the volumetric rate increases as the quantity used increases.
4. Allocation-based rates in which the consumption tiers and respective volumetric rates are based on water use norms and water delivery costs established by the utility.

Adequacy of Volumetric Rates: A retail agency's volumetric rate shall be deemed sufficiently consistent with the definition of conservation pricing when it satisfies at least one of the following two options.

- Option 1: Let V stand for the total annual revenue for the volumetric rate(s) and M stand for total annual revenue from customer meter/service (fixed) charges, then:

$$\frac{V}{(V+M)} \geq 70\%$$

This calculation shall only include utility revenues from volumetric rates and monthly or bimonthly meter/service charges. It shall not include utility revenues from new service connection charges; revenue from special rates and charges for temporary service, fire protection, or other irregular services; revenue from grants or contributions from external sources in aid of construction or program implementation; or revenue from property or other utility taxes.

- Option 2: Use the rate design model included with the Municipal Water and Wastewater Rate Manual published by the Canadian Water & Wastewater Association with the signatory's water system and cost information to calculate V', the uniform volumetric rate based on the signatory's long-run incremental cost of service, and M', the associated meter charge. [Let HCF be annual water delivery (in hundred cubic feet).] The volumetric rate(s) shall be deemed sufficiently consistent with the definition of conservation pricing if:

$$\frac{V}{(V+M)} \geq \frac{V'}{(V'+M')}$$

The rate design model can be downloaded at <http://www.cuwcc.org/resource-center/technical-resources/bmp-tools.aspx>.

This calculation shall only include utility revenues from volumetric rates and monthly or bimonthly meter/service charges. It shall not include utility revenues from new service connection charges; revenue from special rates and charges for temporary service, fire protection, or other irregular services; revenue from grants or contributions from external sources in aid of construction or program implementation; or revenue from property or other utility taxes.

The Agency shall maintain a rate structure that satisfies at least one of the options specified above. Conformance to Option 1 or Option 2 will first be assessed using the revenue from the most recent year. If the most recent year does not satisfy the option, the average revenue from the three (3) most recent years will be used.

3.11.2 CUWCC Documentation Requirement

For water, provide the following:

1. Report the rate structure in effect for each customer class for the reporting period.
2. Report the annual revenue derived from volume charges for each retail customer class, as defined above. (Note: Compliance with BMP 11 will be determined based on the Agency's total revenue from all retail customer classes.)
3. Report the annual revenue derived from monthly or bimonthly meter/service charges for each retail customer class, as defined above.
4. If agency does not comply with Option 1 in Section A, report v' and m' as determined by the Canadian Water & Wastewater Association rate design model described above.
5. If agency does not comply with Option 1 in Section A, submit the completed Canadian Water & Wastewater Association rate design model described above.

For sewer, provide the following:

1. Report annual revenue requirement for sewer service by customer class for the reporting period.
2. Report annual revenue for sewer service from commodity charges by customer class for the reporting period.
3. Report rate structure by customer class for sewer service.

3.11.3 CUWCC Goal

The CUWCC goal for DMM 11 varies depending on the option for volumetric pricing selected. Table 3-12 summarizes the CUWCC goals.

Table 3-12: CUWCC Goals for DMM 11

Years After Start Year	For Option 1	For Option 2
1	$\frac{V}{(V+M)} > 70\% \times 0.70$	$\frac{V}{(V+M)} > \frac{V'}{(V'+M')} \times 0.7$
2	$\frac{V}{(V+M)} > 70\% \times 0.80$	$\frac{V}{(V+M)} > \frac{V'}{(V'+M')} \times 0.8$
3	$\frac{V}{(V+M)} > 70\% \times 0.90$	$\frac{V}{(V+M)} > \frac{V'}{(V'+M')} \times 0.9$
4	$\frac{V}{(V+M)} > 70\% \times 1.00$	$\frac{V}{(V+M)} > \frac{V'}{(V'+M')} \times 1.0$

3.11.4 AWA Status

The Agency is currently implementing this program, but has not yet achieved the CUWCC goal.

3.11.5 Existing AWA Program

The Agency's first conservation pricing rates were adopted in 1980. Since then, the rates have been adjusted and amended several times, most recently in 2005. The Agency uses a tiered structure for water service rates in the communities where it provides retail water service from the CAWP system. This is a major factor in promoting effective water conservation. Tiered rates for the Amador Water System (2,500

foot elevation and below) have not yet been developed. The Agency's water rates and charges are included in Appendix D. Table 3-13 summarizes the Agency's current conservation pricing structure. Table 3-14 is an example of the water pricing structure. Table 3-15 is an example of the wastewater pricing structure for the Agency's wastewater customers.

Table 3-13: Amador Water Agency Conservation Pricing

Residential			
Water rate structure:	Service Charge plus a 2-tier commodity rate	Sewer rate structure:	Flat user charge
Year rate effective:	Varies by system ^a	Year rate effective:	Varies by system ^a
Commercial			
Water rate structure:	Service Charge plus a 1-tier commodity rate	Sewer rate structure:	Flat user charge
Year rate effective:	Varies by system ^a	Year rate effective:	Varies by system ^a
Industrial			
Water rate structure:	Service Charge plus a 1-tier commodity rate	Sewer rate structure:	n/a
Year rate effective:	Varies by system ^a	Year rate effective:	n/a
Institutional/Government			
Water rate structure:	Service Charge plus a 1-tier commodity rate	Sewer rate structure:	n/a
Year rate effective:	Varies by system ^a	Year rate effective:	n/a
Irrigation			
Water rate structure:	Service Charge plus a 1-tier commodity rate		
Year rate effective:	Varies by system ^a		
Wholesale			
Water rate structure:	Service Charge plus a 1-tier commodity rate		
Year rate effective:	Varies by system ^a		

Note: See Appendix D for price and dates adopted for each water and wastewater system.

Table 3-14: Example Water Pricing

Metered Treated (Routes 02-13)	Per Month	Per Unit
5/8" Monthly Service Charge	\$25.20	\$1.90
48 Hour Late Notice Charge	\$10.00	
Meter set fee (5/8" meter)	\$375.00	
AWS Treated Retail Participation fee (5/8" meter)	\$11,000.00	
AWS Treated Participation fee (wholesale)	\$7,820.00	
Flat Rate Treated (Routes 09-13)	Per Month	
Monthly Service Charge (7000 sq. ft. or less)	\$76.96	
7001 to 16000 sq. ft.	\$90.20	
16001 to 25000 sq. ft.	\$203.15	
Additional dwelling unit	\$44.20	
48 Hour Late Notice Charge	\$10.00	
Metered Untreated (Route 01 and 08)	Per Month	Per Unit
5/8" Monthly Service Charge	\$19.60	\$0.53
48 Hour Late Notice Charge	\$10.00	
Meter set fee (5/8" meter)	\$375.00	
AWS Raw Water Participation Fee	\$3,130.00	
Flat Rate Untreated (Route 01 and 08)	Per Month	
Monthly Service Charge (7000 sq. ft. or less)	\$36.92	
7001 to 16000 sq. ft.	\$40.61	
16001 to 25000 sq. ft.	\$61.67	
Additional dwelling unit	\$24.85	
48 Hour Late Notice Charge	\$10.00	
CAWP Retail (Routes 15-21, 23, 31-32)	Bi-monthly	Per Unit
5/8" Bi-monthly service charge	\$67.50	
1-20 units		\$2.08
21 & more units		\$3.12
<i>Non-residential Commodity Rate (all units)</i>		\$2.49
48 Hour Late Notice Charge	\$10.00	
Annual Assessment (July) <i>Unconnected accts. only</i>	\$70.00 per year	
Meter set fee (5/8" meter)	\$375.00	
CAWP Wholesale Annexation Fee	\$5,605.00	
CAWP Retail Participation fee	\$3,715.00	
ID#3 La Mel Heights (Route 22)	Bi-monthly	Per Unit
		\$1.65 (1-100 units)
		\$2.45 (101 units or more)
5/8" Bi-Monthly Service Charge	\$80.00	
Annual Assessment \$180.00	\$30.00	
48 Hour Late Notice Charge	\$10.00	
Meter set fee (5/8" meter)	\$375.00	

Table 3-14 continued from previous page		
ID#7 Lake Camanche (Route 33)	Bi-monthly	Per Unit
5/8" Bi-Monthly Service Charge	\$47.50	
1-50 units		\$1.16
51+ units		\$1.94
48 Hour Late Notice Charge	\$10.00	
Meter set fee (5/8" meter)	\$375.00	
ID#7 Retail Participation fee	\$4,170.00	
ID#7 Equalization fee	\$8,005.00	
<i>Annual Non-metered Charge (Route 37)</i>	<i>\$100.00</i> <i>Annually</i>	

Note: As of 2010

Table 3-15: Example Wastewater Pricing

Eagle's Nest- WW ID No.2	Standby	User Rate
Monthly Service Charge Route 51	\$30.00	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Surrey Junction- WW ID No. 3	Standby	User Rate
Monthly Service Charge Route 52	\$27.00	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Wildwood- WW ID No. 4	Standby	User Rate
Monthly Service Charge Route 53	\$21.00	\$86.55
Sewer Permit/Inspection Fee	\$3500.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Gayla Manor- WW ID No. 5	Standby	User Rate
Monthly Service Charge Route 54	\$34.00	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Jackson Pines- WW ID No. 6	Standby	User Rate
Monthly Service Charge Route 57	\$39.60	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Fairway Pines- WW ID No. 7	Standby	User Rate
Monthly Service Charge Route 56	\$39.60	\$71.75
Sewer Permit/Inspection Fee	\$250.00	\$250.00
48 Late Notice Charge	\$10.00	\$10.00
Pine Grove- WW ID No. 8	Standby	User Rate
Monthly Service Charge Route 58	\$27.73	\$101.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
PGWW Buy in Fee	\$3705.00	
48 Late Notice Charge	\$10.00	\$10.00
Viewpoint- WW ID No. 9	Standby	User Rate
Monthly Service Charge Route 55	\$39.60	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00
Tiger Creek Estates- WW ID No. 10	Standby	User Rate
Monthly Service Charge Route 59	\$32.56	\$86.55
Sewer Permit/Inspection Fee	\$350.00	\$350.00
48 Late Notice Charge	\$10.00	\$10.00

Table 3-15 continued from previous page		
Lake Camanche- WW ID No. 11 (Route 35 & 39)	Standby	User Rate
Monthly Service Charge (with water meter)		\$94.20
-without water meter		
Special Facility Fee/per unit of use	\$5,565.00	
Facility Expansion Charge	\$18,970.00	
Sewer Permit/Inspection Fee	\$350.00	
48 Hour Late Notice Charge	\$10.00	
Martell- WW ID No. 12 (Route 30)		User Rate
Monthly User Rate (Residential)		\$64.39
Monthly User Rate (Commercial)		
Fixed Service Charge (per EDU)		\$20.79
Low Strength Users (per CCF)		\$7.95
Medium Strength Users (per CCF)		\$9.70
High Strength Users (per CCF)		\$13.20
Equalization Charge/per unit of use	\$9,682.00	
Sewer Permit/Inspection Fee	\$350.00	
48 Hour Late Notice Charge	\$10.00	

Footnote: As of 2010

3.11.6 Future AWA Program

The Agency calculated $V/(V+M)$, which equals 51%. V is equal to the total annual revenue from volumetric rates and M equals the total annual revenue from customer service (fixed) charges. For AWA, V is equal to \$3.4 million and M is equal to \$3.3 million. The Agency is currently meeting the requirement for Year 1 for Option 1, as 51% is greater than $0.7 \times 70\%$ (or 49%). The Agency will continue to charge volumetric pricing and increase the volumetric component until full coverage is achieved.

3.12 DMM 12: Water Conservation Coordinator

3.12.1 CUWCC Description

Under DMM 12, a person will be designated as the agency's responsible conservation coordinator for program management, tracking, planning, and reporting on BMP implementation. Coverage shall consist of staffing and maintaining the position of trained conservation coordinator, or equivalent consulting support, and provide that function with the necessary resources to implement BMPs.

3.12.2 CUWCC Documentation Requirement

Provide the contact information for the conservation coordinator, or consultant assigned, and verification that the position is responsible for implementing the tasks identified above.

3.12.3 CUWCC Goal

Staff and maintain a position of a trained conservation coordinator.

3.12.4 AWA Status

Until recently, this DMM has been fully implemented.

3.12.5 Existing AWA Program

The Agency has historically has assigned conservation coordinator duties to a member of the Agency's staff. However, the Agency's recent Conservation Coordinator has retired and a new coordinator has not yet been named. Once appointed, the Agency's Conservation Coordinator will be responsible for the conservation program management, tracking, planning, and reporting on implementation of the DMMs as described in this Plan.

3.12.6 Future AWA Program

The Agency plans to appoint a replacement Conservation Coordinator, however, due to current budget constraints, this position will only be staffed half-time. If outside funding were obtained for program implementation, a full-time conservation coordinator will be hired.

3.13 DMM 13: Water Waste Prohibition

3.13.1 CUWCC Description

The CUWCC describes this DMM as applying in three different ways:

1. New development – Enact, enforce, or support legislation, regulations, ordinances, or terms of service that (1) prohibit water waste such as, but not limited to: single-pass cooling systems; conveyer and in-bay vehicle wash and commercial laundry systems which do not reuse water; non-recirculating decorative water fountains and (2) address irrigation, landscape, and industrial, commercial, and other design inefficiencies.
2. Existing users – Enact, enforce, or support legislation, regulations, ordinances, or terms of service that prohibit water waste such as, but not limited to: landscape and irrigation inefficiencies, commercial or industrial inefficiencies, and other misuses of water.
3. Water shortage measures – Enact, enforce, or support legislation, regulations, ordinances, or terms of service that facilitate implementation of water shortage response measures.

To successfully implement this DMM, the Water Agency shall do one or more of the following:

- a) Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b) Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c) Support legislation or regulations that prohibit water waste
- d) Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e) Support local ordinances that prohibit water waste
- f) Support local ordinances that establish permit requirements for water efficient design in new development.

3.13.2 CUWCC Documentation Requirement

Documentation requirements for DMM 13 include the following:

- A description of, or electronic link to, any ordinances or terms of service adopted by water agency to meet the requirements of this BMP
- A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies within the water agency's service area.
- A description of water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement consistent with this BMP.

- A description of agency support positions with respect to adoption of legislation or regulations consistent with this BMP.

3.13.3 CUWCC Goal

Adopt and enforce a water waste ordinance.

3.13.4 AWA Status

The Agency has implemented this DMM through its adoption of a water conservation policy that supports local ordinance that prohibits water waste.

3.13.5 Existing AWA Program

The Agency first adopted a water shortage plan in 1985. The Agency has both voluntary and mandatory water conservation policies in the Amador Water Agency Water Code. Specific measures include:

- unattended watering prohibited
- shortening irrigation season
- restrictions on car, boat, building and trailer washing
- restrictions on the washing of sidewalks and driveways
- restrictions on filling of swimming pools
- restrictions on use of potable water for sewer flushing, dust control, earth compaction and other construction uses

The Agency's water shortage ordinance is included in Appendix E, but a water waste ordinance has not been adopted.

3.13.6 Future AWA Program

The Agency will consider the development and adoption of a water waste ordinance by the end of 2012. The ordinance would be a year-round policy that prohibits overwatering landscape, system leaks, and open hoses for example, among other water wasting actions. Violators would receive oral and/or written notice of violation. Repeat violators, both residential and commercial, could be fined up to \$1,000 and \$2,000, respectively.

3.14 DMM 14: WaterSense Specification (WSS) Toilets

3.14.1 CUWCC Description

Under DMM 14, the Agency will provide financial incentives or ordinances requiring the replacement of existing toilets using 3.5 or more gallons per flush (gpf) with a toilet meeting WSS. WaterSense high efficiency toilets use a maximum of 1.28 gpf, which is 20% less than the current federal standard of 1.6 gpf. Ultra low-flow toilets (ULFT) differ in that they cannot be WaterSense certified and they do not save as much water. Numerous toilets have been certified to meet WaterSense criteria and retailers are committed to making them available in stores. A complete list of certified toilets can be accessed here:

http://www.epa.gov/WaterSense/pp/find_het.htm.

3.14.2 CUWCC Documentation Requirement

Documentation requirements for DMM 14 include a description of the program and the number of WSS toilet installations credited to the Agency's replacement program disaggregated by single-family or multi-family units.

3.14.3 CUWCC Goal

Demonstrate a number of toilet replacements of 3.5 gpf or greater, toilets at or above the level achieved through a retrofit on resale ordinance until 2014, or a market saturation of 75% is demonstrated, whichever is sooner.

3.14.4 AWA Status

The Agency has not yet implemented this DMM.

3.14.5 Existing AWA Program

The Agency has not yet implemented this DMM.

3.14.6 Future AWA Program

Similar to the High Efficiency Clothes Washers (HECWs) rebate program that the Agency will implement under DMM 6, the WSS Toilet rebate program will be available, initially, only to customers in Wastewater Improvement District #11 (WWID #11), which serves the Lake Camanche Village area, due to wastewater disposal problems in the area. After one year, the WSS Toilet rebate program will be evaluated for cost efficiency, public participation and response, and changes in quantity of wastewater effluent. Initially, \$50 rebates will be offered for WSS Toilets. The program can then be adjusted, as necessary. The rebate program will likely be expanded and offered to the entire County by 2012. The WSS Toilet rebate program would have the multi-beneficial result of reducing both wastewater production and water demand in the Lake Camanche Village region.

Table 3-16 summarizes the planned program costs and water savings.

Table 3-16: Single Family WSS Toilet Replacement Program

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of WSS Toilet rebates to be paid	15	30	30	30	30
Projected Water Savings (AFY) ^a	0.4	0.9	0.9	0.9	0.9

Note: Assuming 2.5 people per household with non-conserving toilets using 18.7 gal/day/person and WSS toilet using 8.3 gal per day per person.

3.15 DMM 15: WaterSense Specifications for New Residential Development

3.15.1 CUWCC Description

The Agency will provide financial incentives and/or ordinances requiring new residential construction meeting WSS for single family and multi-family housing, regardless of the number of stories.

3.15.2 CUWCC Documentation Requirement

DMM 15 documentation requirements include a copy of the new development ordinance or, if financial incentives are offered, provide the following information: number of new single family and multi-family units built in the service area during the reporting period; description of the incentives offered (including incentive amounts); number of WSS fixtures installed; and number of participating single family and multi-family units.

3.15.3 CUWCC Goal

Provide incentives such as, but not limited to, rebates, recognition programs or reduced connection fees, or ordinances requiring residential construction meeting WSS for single-family and multi-family housing until a local, state or federal regulation is passed requiring water efficient fixtures.

3.15.4 AWA Status

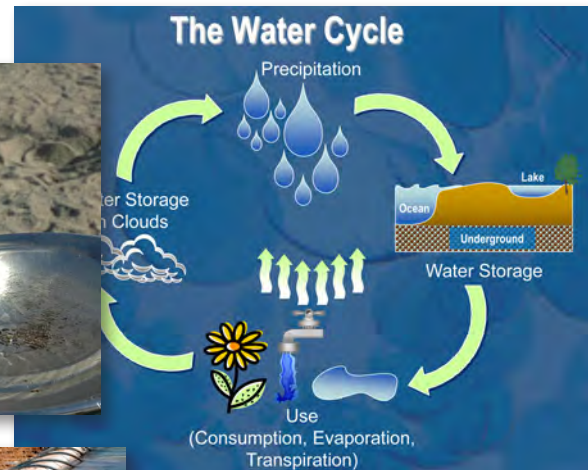
The Agency has not yet implemented this DMM.

3.15.5 Existing AWA Program

The Agency has not yet implemented this DMM.

3.15.6 Future AWA Program

AWA plans to amend its existing Water Code, last revised July 2, 2007, to require water efficient fixtures meeting WaterSense Specifications in all construction of new residential development. AWA estimates spending approximately \$10,000 to amend Section 2.20 – Mandatory Water Conservation of the Agency's Water Code in fiscal year 2012.



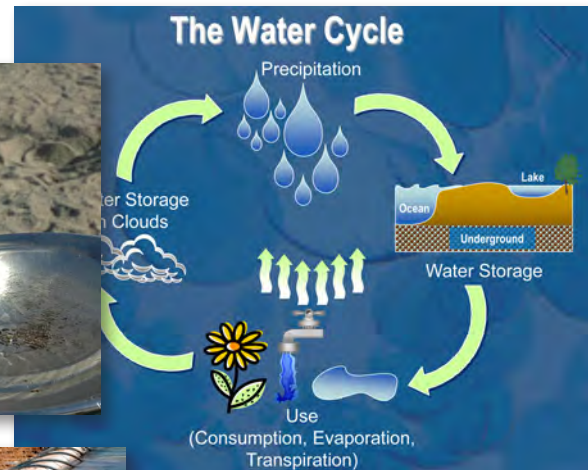
Public Involvement and Support

Chapter 4 Public Involvement and Support

The development of this conservation plan includes presentations and discussions at several workshops with the Amador Water Agency Board of Directors. These workshops were open to the public for both observation and comment.

The draft Conservation Program was also presented to the Agency's rate payers through a public workshop held on October 14, 2010. A three to four week public comment period preceded the public meeting during which the Agency received comments and questions regarding the draft plan. The final Conservation Plan incorporated and addressed, as reasonable, the public comments received.

The Amador Water Agency Board of Directors formally adopted this Conservation Plan on October 14, 2010.



References

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**Appendix A - Amador Water Agency DMM Programs -
November 2010**

	DMM1	DMM2	DMM3	DMM4	DMM5	DMM6	DMM7	DMM8	DMM9
	Residential Assistance & Survey Programs	Residential Plumbing Retrofits	System Water Audits, Leak Detection & Repair	Metering with Commodity Rates for All New Connections and Retrofit for Existing Connections	Large Landscape Rebate Program	High Efficiency Clothes Washer Rebate Program	Public Education Programs	School Education Programs	Commercial, Industrial and Institutional Programs
Status	Partially implemented	Not yet implemented	Partially implemented	Partially implemented	Not yet implemented	Not yet implemented	Partially implemented	Partially implemented	Not yet implemented
Cost for FY11-12 Implementation	\$5,400	\$3,900	\$7,500	\$9,000	\$685	\$5,300	\$4,100	\$3,240	\$2,200
Cost for FY12-13 Implementation	\$10,600	\$7,780	\$7,500	\$0	\$1,055	\$5,600	\$4,100	\$6,465	\$3,700
Cost for FY13-14 Implementation	\$10,700	\$7,780	\$7,500	\$0	\$1,055	\$5,600	\$4,100	\$6,465	\$3,700
Cost for FY14-15 Implementation	\$10,800	\$7,780	\$7,500	\$0	\$1,055	\$5,600	\$4,100	\$6,465	\$4,400
Cost for FY15-16 Implementation	\$10,900	\$7,780	\$85,000	\$0	\$1,055	\$5,600	\$4,100	\$6,465	\$5,800
Water Savings During FY11-12 Implementation (AFY)	N/Q	2.73	N/Q	N/Q	3.9	0.9	N/Q	2.2	2.0
Water Savings During FY12-13 Implementation (AFY)	N/Q	5.45	N/Q	N/Q	5.3	1.7	N/Q	4.4	3.0
Water Savings During FY13-14 Implementation (AFY)	N/Q	5.45	N/Q	N/Q	5.3	1.7	N/Q	4.4	3.0
Water Savings During FY14-15 Implementation (AFY)	N/Q	5.45	N/Q	N/Q	5.3	1.7	N/Q	4.4	4.0
Water Savings During FY15-16 Implementation (AFY)	N/Q	5.45	N/Q	N/Q	5.3	1.7	N/Q	4.4	6.0

N/Q - not quantifiable
1. Reduced revenue assumes average cost of \$1.50 per unit of water.

Fiscal Year 2012 = FY12 = FY11-12 = 7/1/11 to 6/30/12

DMM10	DMM11	DMM12	DMM13	DMM14	DMM15				
Wholesale Agency Programs	Retail Conservation Pricing	Conservation Coordinator	Water Waste Prohibition	WaterSense Specification (WSS) Toilet Rebate Program	WSS for New Residential Development	Reduced Sales Revenue	Implementation Costs	Total Cost	
Partially implemented	Partially implemented	Not yet implemented	Fully Implemented	Not yet implemented	Not yet implemented				
\$1,340	\$0	\$36,500	\$0	\$3,325	\$10,000	\$7,907	\$92,490	\$100,397	Cost for FY11-12 Implementation
\$2,680	\$0	\$36,500	\$0	\$1,650	\$0	\$13,526	\$87,630	\$101,156	Cost for FY12-13 Implementation
\$2,680	\$10,000	\$36,500	\$0	\$1,650	\$0	\$13,526	\$97,730	\$111,256	Cost for FY13-14 Implementation
\$2,680	\$0	\$36,500	\$0	\$1,650	\$0	\$14,180	\$88,530	\$102,710	Cost for FY14-15 Implementation
\$2,680	\$0	\$36,500	\$0	\$1,650	\$0	\$15,487	\$167,530	\$183,017	Cost for FY15-16 Implementation
N/Q	N/Q	N/Q	N/Q	0.4	N/Q		12.1		Water Savings During FY11-12 Implementation (AFY)
N/Q	N/Q	N/Q	N/Q	0.9	N/Q		20.7		Water Savings During FY12-13 Implementation (AFY)
N/Q	N/Q	N/Q	N/Q	0.9	N/Q		20.7		Water Savings During FY13-14 Implementation (AFY)
N/Q	N/Q	N/Q	N/Q	0.9	N/Q		21.7		Water Savings During FY14-15 Implementation (AFY)
N/Q	N/Q	N/Q	N/Q	0.9	N/Q		23.7		Water Savings During FY15-16 Implementation (AFY)
Total Water Savings =							98.9		
Total Implementation Costs =							\$533,910		
Reduced Sales Revenue =							\$64,626		
Total Program Costs =							\$598,536		
Cost per AF of water saved =							\$6,052		
Average Annual Program Implementation Cost =							\$106,782		
Average Annual Program Implementation Cost per connection =							\$76		
Average Annual Program Total Cost =							\$119,707		
Average Annual Program Total Cost per connection=							\$86		

DMM1 - Water Survey Programs for Residential Customers

CUWCC Goal:

CUWCC Coverage:

Provide site-specific leak detection assistance that may include, but is not limited to, water conservation survey, water efficiency suggestions and/or inspection.

- Provide leak detection assistance averaging 1.5% per year of SF accounts and 1.5% of multi-family accounts per year for first ten years.

- After meeting 10 year 15% target, maintain program at level of high-bill complaints or not less than 0.75% per year of current single family accounts and 0.75% per year of current multi-family accounts.

- Provide the same level of compliance for landscape surveys.

Status: This DMM has been partially implemented.

Program:

Assume:

\$105 per survey
6516 # of current SF accts
47 # of current MF accts
4 hours per survey

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of single fam surveys	50	100	100	100	100
# of multi fam surveys	1	1	2	3	4
# of landscape surveys	50	100	100	100	100
project expenditures	\$5,400	\$10,600	\$10,700	\$10,800	\$10,900

Data Needs: In FY11, the Agency will perform 10 SF surveys, 1 MF survey, and 10 landscape surveys.

None FY11 total cost = \$1,200

- Other:
1. Assume residential landscape surveys conducted at same time as indoor residential surveys
 2. Assume 4 hours total per survey (start to finish) at \$35/hour (Customer Service Technician). Assume 3 hours for survey by technician(2 hours for travel time and 1 hour for survey) and one hour for coordinator to log survey. Coordinator time included in cost for DMM12.

DMM 2 - Residential Plumbing Retrofits

CUWCC Goal: Provide plumbing retrofits to meet current water efficiency standards as stipulated in the WaterSense Specifications.

CUWCC Coverage: - Plumbing device distribution and installation programs to be maintained at a level sufficient to distribute high quality, low-flow showerheads to not less than 10% of single-family residences and 10% of multi-family units constructed prior to 1992 each reporting period; or enactment of an enforceable ordinance requiring the replacement of high-flow showerheads and other use fixtures with their low-flow counterparts.

- Continue until coverage includes 75% of single family and multi-family units are covered.

Status: This DMM has not yet been implemented.

Program:

Assume:

Rebates are still offered to residents without children in 5th grade

\$15 rebate per showerhead

\$5 rebate processing cost

5 gal/day/person savings from showerheads

325851 gal/AF

2.5 people/household

0.014001798 AFY/household savings from showerheads

3857 No. of single family residential accounts prior to 1992

28 No. of multi-family residential accounts prior to 1992

5786 No. of residential accounts in 2000 (per 2005 UWMP)

	FY12	FY13	FY14	FY15	FY16
# showerhead rebates	195	389	389	389	389
\$ showerheads	\$3,900	\$7,780	\$7,780	\$7,780	\$7,780
AFY savings showerheads	2.7	5.4	5.4	5.4	5.4
\$/AF	\$1,428	\$1,428	\$1,428	\$1,428	\$1,428

This DMM was not budgeted for in FY11.

Note: Residential Plumping Retrofits will not include low-flow toilets, as that is solely DMM14 - WaterSense Specification Toilet Rebate Program.

Data Needs:

Other:

DMM 3 - System Water Audits, Leak Detection, and Repair

CUWCC Goal:	Annual prescreening system audit to determine the need for a full-scale system audit, followed by such a full-scale system audit, if necessary, as described in <i>AWWA Water Audit and Leak Detection Guidebook</i> . Additionally, advise customers of leaks on their side when identified as part of system audit
CUWCC Coverage:	1. Maintain an active distribution system auditing program. 2. Repair identified leaks where cost-effective.

Status: This DMM has been partially implemented.
Program:

Assume:

\$7,500 Cost for annual pre-screening system audit
\$85,000 Cost for detailed screening system audit

This DMM will begin in FY12.

Data Needs:
None

Other:
1. Assume a detailed screening system audit will be required every 5 years and that on those years, a pre-screening system audit will not be prepared.
2. Use Year Water Usage reports to help identify potential areas with elevated volumtes of unaccounted-for water (i.e. areas of potential leaks).

DMM 4 – Metering with Commodity Rates for All New Connections and Retrofit for Existing Connections

CUWCC Goal:	100% of existing unmetered accounts to be metered and all accounts to be billed by volume of use.
CUWCC Coverage:	1. All accounts retrofitted to be metered. 2. All accounts (once metered) to be billed based on volume of use. 3. Written plan, policy or program prepared to test, repair and replace broken meters.

Status: This DMM has been partially implemented.
Program:

Assume:

9 No. of unmetered residential potable accounts (2010)

17 No. of unmetered agricultural raw accounts (2010)

\$375 /meter for retrofit

25 units savings/month-retrofit

100 cf/1 unit

7.4805 gal/cf

325851 gal/AF

\$1,500 costs associated with account conversion and replacement program, including policy devleopment

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of meter conversions	20	0	0	0	0
# of accts from flat to volumetric use	153	0	0	0	0
projected expenditures	\$9,000	\$0	\$0	\$0	\$0

In FY11, the Agency will convert 7 unmetered accounts to metered, for a total cost of \$2,625

Current Meter Status:

Customer Class	Up to 7,000	7,001 to 16,000	Over 16,000	Total
Residential (Sch. B)	5	1	3	9
Residential (Sch. MB)	34	55	26	115
Commercial (Sch. B)	1			1
Ditch System (Sch. E)			17	17
Ditch System (Sch. ME)	1		10	11
Total	41	56	56	153

Data Needs:

Other:

DMM5 - Large Landscape Rebate Program

CUWCC Goal: Provide non-residential customers with support and incentives to improve landscape water use efficiency; Develop and implement a strategy targeting the marketing large landscape water use surveys to CII accts with mixed-use meters.

CUWCC Coverage:

- Develop ETo-based water use budget for 90% of CII accounts with dedicated irrigation meters at average rate of 9% per year over 10 years.
- Offer site-specific technical assistance annually to all accounts that are 20% over budget within six years of implementation.
- Complete irrigation water use surveys for ≥ 15% of CII accounts with mixed-use meters & unmetered accounts within 10 years.
- Agency will implement and maintain incentive programs for irrigation equipment retrofit.

Status: This DMM has not been implemented.

Program:

assume:

- 9% complete budget for this % of dedicated accounts each year for 10 years
- 30 dedicated irrigation accounts
- \$50 rebate for WBIC
- \$105 per survey (staff cost)
- \$0 per water budget (conservation coordinator - cost included in DMM12)
- \$5 per rebate for adminitrative costs
- 10% savings/survey
- 19.5 afy/per landscape account
- 359 No. CII accounts with mixed use meters
- 389 No. of CII accounts

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# budgets created	2	3	3	3	3
# of surveys	4	6	6	6	6
# follow up visits	2	3	3	3	3
# rebates	1	2	2	2	2
projected expenditures	\$685	\$1,055	\$1,055	\$1,055	\$1,055
projected water savings	3.9	5.3	5.3	5.3	5.3
\$/AF	\$176	\$199	\$199	\$199	\$199

This DMM was not budgeted for FY11.

15% of CII accounts = 54 so over 10 years is 6 accounts/year

Therefore, assume half of accounts surveyed will require some follow-up action.

Data Needs:

None

Other:

1. Options include:

- landscape water use analysis/surveys
- voluntary water use budgets
- Installation of dedicated landscape meters
- Training
- Financial incentives to improve irrigation system efficiency such as loans, rebates and grants for purchase and/or installation of water efficient irrigation systems.
- Follow-up water use analyses/surveys consisting of a letter, phone call or site visit where appropriate.

2. Assume 5 hours total per survey (start to finish) at \$35/hour (Customer Service Technician). Assume 3 hours for survey by technician(2 hours for travel time and 1 hour for survey) and 3 hour for coordinator to log survey and calculate budget. Coordinator time included in cost for DMM12.

DMM 6 - HECWs rebate program

CUWCC Goal:	Provide incentives to 0.9% of current single-family accounts during first period, and 1%/year for remainder of 10 year period
CUWCC Coverage:	- Provide financial incentives for purchase of HECWs that meet an average water factor of 5.0 - Provide financial incentrives to 0.9% of the current single family accounts in the first year, followed by 1% of single family accounts during years 2 through 10 or demonstrate 1.4%/year of market penetration.

Status: This DMM has not been implemented.
Program:

assume:

400 loads/household/year	planned	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
40 gal/load -- non-conserving machine	\$/rebate	\$75	\$75	\$75	\$75	\$75
20 gal/load -- HECW	# rebates	35	70	70	70	70
20 gal/load of water savings	admin cost	\$175	\$350	\$350	\$350	\$350
8000 gal/household/year of water savings	projected expenditures	\$5,300	\$5,600	\$5,600	\$5,600	\$5,600
0.02456 AFY/household	projected water savings (AFY)	0.9	1.7	1.7	1.7	1.7
\$75 per rebate	\$/AF	\$5,889	\$3,294	\$3,294	\$3,294	\$3,294
\$5 per rebate for adminstrative costs	This DMM not budgeted for FY11.					
6516 homes						
\$2,500 first year setup cost (assume \$5,000 for rebate program set up; split between DMM6 and DMM14)						

Data Needs:
None

Other:
1. Assume rebate will be credit against account billing.

DMM 7: Public Education Programs

CUWCC Goal:	Use public information programs as an effective tool to inform customers about the need for water conservation and the ways that they can conserve, and to influence customer behavior to conserve.
CUWCC Coverage:	<div><div>- Implement programs within the first year.</div><div>- Minimum of four contacts with public per year</div><div>- Minimum of four contacts with media per year</div><div>- Actively maintain website with updates at least four times per year.</div></div>

Status: This DMM has been partially implemented.

- Program:**
1. Update website to be more user friendly and more specific to area. Include links to other websites

2. Take inventory of existing materials and update as needed

3. Identify 4 opportunities (i.e. fairs) for providing outreach

4. Establish budget for making contacts, above

Assume:

\$300 for materials and prep for presentation/demos

\$300 per media contact/demo

\$500 per year for bill inserts

\$300 for website maintenance

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
Public Presentations/Demos	4	4	4	4	4
Contacts with Media	4	4	4	4	4
Bill Messages	6	6	6	6	6
Update website	4	4	4	4	4
Cost	\$4,100	\$4,100	\$4,100	\$4,100	\$4,100

Data Needs:
None

Other:
Quarterly newsletter
Monthly bill message
Separate webpage for conservation information
conservation blog

DMM 8 – School Education Program

CUWCC Goal:	Reach youngest water users at early age and inform need to engage in water conservation as life-long behavior.
CUWCC Coverage:	<div>- Implement programs within the first year.</div> <div>- Curriculum material developed and/or provided by agency.</div> <div>- Material distributed to K-6 students.</div> <div>- Description of materials used in the program.</div>

Status: This DMM has been partially implemented.

Program:

Assume:

\$15 per showerhead

\$300 for materials/prep/presentation

6 number of schools

311 fifth grade students

5 gal/day/person savings from showerheads

325851 gal/AF

2.5 people/household

0.014001798 AFY/household savings from showerheads

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# of giveaways	156	311	311	311	311
# presentations	3	6	6	6	6
total cost	\$ 3,240	\$ 6,465	\$ 6,465	\$ 6,465	\$ 6,465
total water savings	2.2	4.4	4.4	4.4	4.4
\$/AF	\$1,473	\$1,469	\$1,469	\$1,469	\$1,469

In FY11, there will be not be any giveaways, but the Agency will give 2 presentation for a total cost of \$600

note: cost for presentations to fifth graders is included in DMM

Data Needs:

None

Other:

6 elementary schools with the following 5th grade enrollments (no. of 5th grade classes):

lone Elementary - 92 (4 classes)

Jackson - 74 (3 classes)

Pine Grove - 45 (2 classes)

Pioneer - 30 (1 class)

Plymouth - 25 (1 class)

Sutter Creek - 45 (2 classes)

Total No. 5th Grade Classes - 13 for total of 311 5th grade students

DMM 9 - CII Programs

CUWCC Goal:	Implement measures to achieve water savings of 10% of baseline CII water use over 10 years.
CUWCC Coverage:	Estimated savings as percent of baseline water use ≥ 0.5% by year two, 2.4% by year four, 4.3% by year six, 6.4% by year eight and 9% by year 10. - Percentages will be adjusted proportionally up for up to 50% past credit.

Status: This DMM has not been implemented.

Future Program:

Assume:						
389 No. of CII accounts						
1461 AFY baseline CII water use (2005)						
\$140 per survey (staff cost)	# of on-site surveys	10	15	15	20	30
\$5 per rebate (administrative cost)	rebates provided	5	10	10	10	10
\$155 average rebate price	# follow up visits	3	5	5	5	5
4 AFY per CII account	project expenditures	\$2,200	\$3,700	\$3,700	\$4,400	\$5,800
5% savings per survey	projected water savings (AFY)	2.0	3.0	3.0	4.0	6.0
	savings as percent of baseline		0.3%		0.8%	
	\$/AF	\$1,100	\$1,233	\$1,233	\$1,100	\$967
Data Needs:	This DMM was not budgeted for in FY11.					
None						

Other:	Agency Rebates:	
1. Sample rebate amounts include:	WSS Toilets	\$50
for He, ultra-low and zero water urinals - \$200 to \$400	Urinal	\$50
for pre-rinse spray heads - \$60	HECW	\$75
for connectionless food steamers - \$485/compartment	Water Broom	\$100
for air-cooled ice machines - \$300/machine	Cooling Tower Controller	\$500
for pressurized waterbrooms - \$150		\$155
for cooling tower conductivitiy controllers - \$625		
for pH/conductivity controllers - \$1,900		
for steam sterilizer retrofits - \$1,900		
for dry-vacuum pumps - \$125/0.5 hp		
2. Assume 5 hours total per survey (start to finish) at \$35/hour (Customer Service Technician). Assume 4 hours for survey by technician(2 hours for travel time and 2 hour for survey) and 1 hour for coordinator to log survey and calculate budget. Coordinator time included in cost for DMM12.		
3. Assume follow up visits conducted by conservation coordinator.		

DMM10 - Wholesale Agency Programs

CUWCC Goal: Provide financial and managerial assistance to retail agencies for implementation of BMPs in their service area.

CUWCC Coverage: Beginning in the first year:

- 1) Provide financial investment and build partnerships with wholesale entities via MOUs and joint programs
- 2) Provide technical support, incentives, staff support or other resources when requested.
- 3) Offer program management and BMP reporting assistance
- 4) Encourage water shortage allocation plans or policies.
- 5) Report retail agency BMP activities.

Status: This DMM has been partially implemented

Future Program:

Assume:

Work performed on behalf of retail agency:

\$105	per survey (staff cost)		FY12	FY13	FY14	FY15	FY16
\$35	rebate for residential device	# of surveys	5	10	10	10	10
\$200	rebate for industrial device	# of water budgets	1	2	2	2	2
\$0	per water budget (staff cost)	# of residential rebates	5	10	10	10	10
\$5	per rebate for administrative costs	# of industrial rebates	3	6	6	6	6
		project expenditures	\$1,340	\$2,680	\$2,680	\$2,680	\$2,680

This DMM was not budgeted for in FY11.

Data Needs:

Other:

1. AWA wholesales water to six communities: Jackson, Drytown CSD, Pine Grove CSD, Rabb Park CSD, Plymouth, and Mace Meadows.
2. Consider developing MOU with these communities to provide conservation support.
3. Send letter to retailers formally offering support in conservation.
4. Formally document when conservation information sent to retailers for distribution in their service area.
5. Assume 4 hours total per survey (start to finish) at \$35/hour (Customer Service Technician). Assume 3 hours for survey by technician (2 hours for travel time and 1 hour for survey) and one hour for coordinator to log survey. Coordinator time included in cost for DMM12.
6. Assume water budgets conducted by conservation coordinator and is part DMM12.

DMM 11 – Retail Conservation Pricing

CUWCC Goal: Promote water conservation via retail water rate structures. Conservation pricing provides economic incentirves to customers to use water efficiently.

CUWCC Coverage: Implement a rate structure that incorporates conservation pricing within seven years.

Status: This DMM has been partially implemented.

Program:

Adequacy of Volumetric Rates determined by one of two methods:

Option 1:

$$\frac{V}{V + M} \geq 70\%$$

where V = total annual revenue from the volumetric rate(s) and M = total annual revenue from customer meter/service (fixed) charges.

Option 2:

$$\frac{V}{V + M} \geq \frac{V'}{V' + M'}$$

where V and M are as above, and V' = the uniform volumetric rate based on the long-run incremental cost of service and M' = the associated meter charge.

CUWCC Program: Years After Start

Using Data from AWA

Year	For Option 1	For Option 2	
1	V/V+M > 70% x 0.70	V/V+M > V'/V'+M' x 0.70	V = \$3,393,185
2	V/V+M > 70% x 0.80	V/V+M > V'/V'+M' x 0.80	M = \$3,309,095
3	V/V+M > 70% x 0.90	V/V+M > V'/V'+M' x 0.90	V/(V+M)= 51%
4	V/V+M > 70% x 1.00	V/V+M > V'/V'+M' x 1.00	Year 1 requirement: 0.49 neets the Year 1 requirement.

As the agency's total revenue from all retail customer classes does not meet the above criteria, the agency will need to increase the voumetric component of the rate structure by up to 10% each year until the full implementation is achieved.

Assume: new rate study and finance plan will be required at a cost of \$10,000 per system/study

Data Needs:

None

Other:

1. per AWA's 2005 UWMP, the Agency is using a tiered structure for water service rates in communities where it provides retail service from the CAWP system.

2. A tiered water rate system is being developed for the Amador Water System.

DMM 12 - Conservation Coordinator

CUWCC Goal:	Designate a person as the agency's responsible conservation coordinator for program mgmt, tracking, planning, and reporting of DMM implementation.
CUWCC Coverage:	Staff and maintain a position of a trained conservation coordinator or equivalent consulting support

Status: This DMM has not been implemented.
Future Program: The Agency will designate a Conservation Coordinator.

\$35 /hr
40 hrs/week for full-time employee
50 weeks/yr
\$1,500 annual training & conferences

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# full-time positions	0.5	0.5	0.5	0.5	0.5
Projected Expenditure	\$36,500	\$36,500	\$36,500	\$36,500	\$36,500

0.5 full-time position = 1 part-time position

Data Needs:
None

- Other:**
- 1. Consider sending conservation coordinator to CUWCC coordinator training and AWWA landscaping training.
 - 2. Cost for Conservation Coordinator includes salary, benefits and overhead plus \$1,500 for annual training & conference attendance.
 - 3. Coordinator paid \$35/hour, fully loaded, and works 20 hours per week, 50 weeks per year (1,000 hrs/yr).

Conservation Coordinator annual time commitment on other DMMs

DMM1	102	1 hour per survey
DMM5	15	1 hour per survey and 3 hours per budget
DMM9	41	1 hour per survey/visit
DMM10	16	1 hour per survey and 3 hours per budget
DMM13	20	2 hours per visit
Rebate Management (DMMs 6, 10 and 14)		
Education (DMMs 7 and 8)		

TOTAL 194

DMM 13 - Water Waste Prohibition

CUWCC Goal: Adopt and enforce a water waste ordinance.

CUWCC Coverage: Do one or more of the following:

- 1) Enact and enforce ordinance or establish terms of service that prohibit water waste.
- 2) Enact and enforce ordinance or terms of service for water efficient design in new development.
- 3) Support legislation or regulations that prohibit water waste.
- 4) Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures.
- 5) Support local ordinances that prohibit water waste.
- 6) Support local ordinances that establish permit requirements for water efficient design in new development.

Status: This DMM has been implemented.

Program:

1. Make sure ordinances, etc. are posted on conservation website and/or add links to such ordinances (i.e. if county ordinance and is posted on county website).

Assume:

\$0 per on-site visit

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
Waste ordinance in effect?	Yes	Yes	Yes	Yes	Yes
# on-site visits	10	10	10	5	5
projected expenditures	\$0	\$0	\$0	\$0	\$0

There will not be any on-site visits in FY11.

Data Needs:

None

Other:

1. New water conservation policy includes statement supporting local ordinances that prohibit water waste.
2. AWA Water Code Section 2.19 describes voluntary water conservation requirements and Section 2.20 describes mandatory water conservation requirements.
3. Consider using applicable sections of the California model water efficient landscape ordinance to create similar ordinance. See www.owue.water.ca.gov/docs/WaterOrdIndex.cfm.
4. Continue to look for opportunities to support state, county and local legislation and regulations that prohibit water waste.
5. Assume onsite visits conducted by conservation coordinator.

DMM 14 - WSS Toilet Replacement Program

CUWCC Goal:	Replace toilets that are 3.5 gpf or greater until 2014 or until market saturation of 75% is demonstrated, whichever is sooner.
CUWCC Coverage:	<div>- Show financial incentive to meet the WaterSense specifications.</div> <div>- Demonstration number of toilet replacements of \geq 3.5 gpf at or above level through a retrofit on resale ordinance until 2014 or a market saturation of 75% is demonstrated.</div>

Status: This DMM has not been implemented.

Program:

Assume:

- 2.5 people/household
- 18.7 gal/person/day -- non conserving toilets
- 8.3 gal/person/day -- WSS toilets
- 10.4 gal/person/day in water savings
- 26 gal/day/household of water savings
- 9490 gal/year/household of water savings
- 0.0291343 AFY/household of water savings
- \$50 per rebate
- \$5 per rebate admin cost
- \$2,500 first year setup cost (assume \$5,000 for rebate program set up; split between DMM6 and DMM14)

	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>	<i>FY16</i>
# rebates	15	30	30	30	30
Admin cost	\$75	\$150	\$150	\$150	\$150
Project expenditures	\$3,325	\$1,650	\$1,650	\$1,650	\$1,650
projected water savings (AFY)	0.4	0.9	0.9	0.9	0.9
\$/AF	\$8,313	\$1,833	\$1,833	\$1,833	\$1,833

Data Needs:

None

Other:

1. Assume rebate will be credit against account billing.

DMM 15: WaterSense Specifications for New Residential Development

CUWCC Goal:	Provide incentives such as, but not limited to, rebates, recognition programs or reduced connection fees, or ordinances requiring residential construction meeting WSS for single-family and multi-family housing until a local, state or federal regulation is passed requiring water efficient fixtures.
CUWCC Coverage:	- Offer incentives until meeting, at a minimum, WSS for water efficient single-family homes. Multi-family housing shall also meet the WSS in all applicable criteria regardless of the total number of stories in the building.

Status: This DMM has not yet been implemented.
Program:

Although DMM 15 is not one of the DMMs required for reporting per AB1420 requirements, AWA has chosen to implement it beginning in FY12. The AWA Water Code will be amended in order to require water efficient fixtures that meet WaterSense Specifications in all new development/residential (single and multi-family) construction within the AWA service area.

Cost to amend AWA Water Code	\$10,000
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Data Needs:

Other:

Appendix B - Public Information Examples



Governor Proclaims Drought, Orders Immediate Action to Address Situation

<http://www.gov.ca.gov>



Water Conservation

Water is one of the most vital resources we have in Amador County. The Agency's policies and practices are designed to promote wise and efficient use of our limited water supply and recognize that water conservation is a key component to the reliability of our water supply.

AWA's water conservation programs are currently designed for voluntary customer participation, demonstrating that wise water use can be achieved without compromising service or lifestyle.

- Home
- Board of Directors
- Meetings & Agendas
- Agency Contacts
- Water Service
- Wastewater Service
- Finance/Rates
- Water Quality
- Press Releases
- Public Information
- Projects for Bid
- Water Conservation
- Career Opportunities
- FAQ's
- Helpful Links
- Forms & Specs
- Water News
- web mail
- Contact Us

Outside Your House

Inside Your House

In Your Community

Agency's Water Wise Garden

Conservation Links



www.wateruseitwisely.com

[California Landscape Contractors](#)



www.h2ouse.org



www.fypower.org

Environmental Protection Agency

epa.gov/watersense



[DWR-Office of Water Use Efficiency](#)

**Notice of Planned
Water Service
Interruption**



[look here to find
out who is
affected](#)

[Association](#)

www.clca.org

Conservation Tips

Outside your House

Water your lawn early in the morning or at night to avoid excess evaporation.

Do not over-water your lawn.

Adjust your lawn mower to a higher setting. Longer grass shades root systems and holds soil moisture.

Aerate your lawn: Punch holes in your lawn about six inches apart so water will reach the roots rather than run off the surface.

Check outdoor faucets and hoses for leaks.

Check automatic sprinklers for leaks, and make sure they are not running when it is raining.

Use lawn chemicals only when necessary

Use a broom, rather than a hose to clean sidewalks or driveways

If you have a swimming pool, use a cover. By so doing, you can cut the loss of water by evaporation by 90 percent.

Do not pour toxic chemicals (such as cleaning products, motor oil, weed killers, or paints) down the drain. Dispose of them properly. Proper disposal is key to water conservation because water is easily contaminated. One gallon of improperly disposed motor oil can contaminate one million gallons of fresh water.

Try Container gardening using drip irrigation.

Plant low water-use plants.

Check and maintain your evaporative cooler so it runs efficiently and leak-free.

Use a layer of organic mulch around plants to reduce evaporation.

Use a hose nozzle to turn off the water while you wash your car.

[Return](#)

Inside Your House

Fully load the dishwasher and clothes washer before running.

When washing dishes by hand, or when brushing your teeth, do not leave the water running.

Repair dripping faucets and leaky toilets. Dripping faucets can waste up to 2,000 gallons of water each year in the average home. Leaky toilets can waste as much as 200 gallons per day.

Defrost frozen food in the refrigerator or in a microwave instead of running hot water over the food.

Use water-efficient showerheads

Collect the water you use for rinsing produce and reuse it to water houseplants.

Insulate hot water pipes so you don't have to run as much water to get hot water to the faucet. You can save this running water too for watering your indoor plants).

Choose water-saving appliances, like washing machines that save up to 20 gallons per load.

Turn off the water while you shampoo and condition your hair and you can save more than 10 gallons a week.

If your toilet was installed prior to 1980, place a toilet dam or bottle filled with water in your toilet tank to cut down on the amount of water used for each flush. Be sure these devices do not interfere with operating parts. [Return](#)

In Your Community

Report significant water losses from broken pipes, open fire hydrants and errant sprinklers to the property owner or to the Water Agency.

Use a commercial car wash that recycles water.

Encourage schools to develop and promote water conservation.

Support projects that use reclaimed wastewater for irrigation and other uses. [Return](#)

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The Amador Water Agency

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203,477 203,478

BOARD OF DIRECTORS

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Sutter Creek, CA 95685
(209) 223-3018 FAX (209) 267-0281



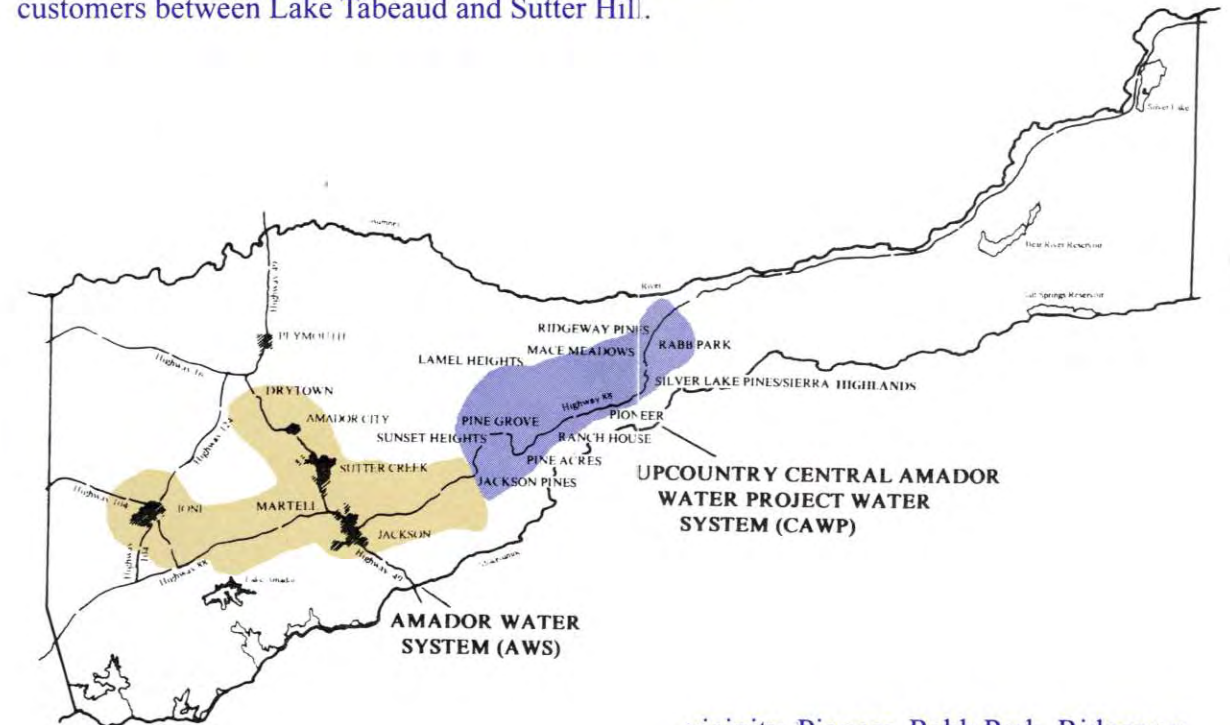
AMADOR WATER AGENCY



*A Countywide Water District
Since 1959*

AMADOR WATER AGENCY *Serving the Water Needs of Your Community*

The **Amador Water System (AWS)**, formerly owned by P.G.&E., serves the areas of Jackson, Martell, Sutter Creek, Sutter Hill, Lone, Amador City, Drytown and hundreds of customers between Lake Tabaud and Sutter Hill.



The **Upcountry Central Amador Water Project System (CAWP)** provides wholesale treated water to the upcountry communities of Sunset Heights, Jackson Pines, Pine Grove, Pine Acres, Ranch House Estates and

vicinity, Pioneer, Rabb Park, Ridgeway Pines, Silver Lake Pines / Sierra Highlands, and the Mace Meadows area. In addition to delivering wholesale water, the Agency also runs the day-to-day operations in the Pioneer Water District, Ranch House Water District, Pine Acres Water District and at a satellite operation in LaMel Heights.

WATER—The New Gold of the Mother Lode



AMADOR WATER AGENCY...

Serving the Water and Wastewater Needs of the County



In 1959, the Amador Water Agency was formed for the purpose of providing water, wastewater and storm drainage services to the residents of Amador County. The Agency is governed by an individual board of five directors (one from each supervisorial district) who are elected to four-year terms. The Board appoints a general manager, who in turn supervises the day-to-day operation of the Agency.

Amador County is a diverse county which ranges in elevation from 200 to 9000 feet and has a total of 568 square miles within its boundaries. The terrain varies from dry valley to dense high Alpine forest demanding a variety of water needs.

WATER SUPPLY

The primary source of water is the Mokelumne River which is supplied from rainfall and snowmelt. This water is stored in Tiger Creek afterbay and Lake Tabeaud and diverted to our treatment plants.

Interestingly enough, the County's history which dates back to the Gold Rush Days, still plays an important role in supplying our customers with water. Some of the same ditches that delivered water to the mines, are now maintained by the Agency and supply our customers with water even today.



More recently the Agency started providing wastewater services to the Fairway Pines, Gayla Manor, Wildwood Estates, Surrey Junction, Jackson Pines and Eagles Nest subdivisions. In these areas the effluent is disposed of by subsurface leach fields and spray disposal fields.

WATER EDUCATION

In a continual effort to promote wise water use, *Aqua Annie*, our Water Education Program spokesperson, visits local schools and attends local events spreading information on the importance of water.

For gardening enthusiasts, or those of you planning on landscaping your yard, the Agency has a water efficient demonstration garden which you can visit at our office on Ridge Road. The garden is designed to illustrate the different varieties of plants available for low water use gardening in Amador County.

SERVICE AREA

The Water Agency serves approximately 10,000 customers within our service boundaries with a work force of approximately 30 employees in the area of customer service, water systems operations which includes treatment plant operations and maintenance, engineering and administration.

The Agency's two main water systems are The Amador Water System (AWS) and the Upcountry Central Amador Water Project System (CAWP).



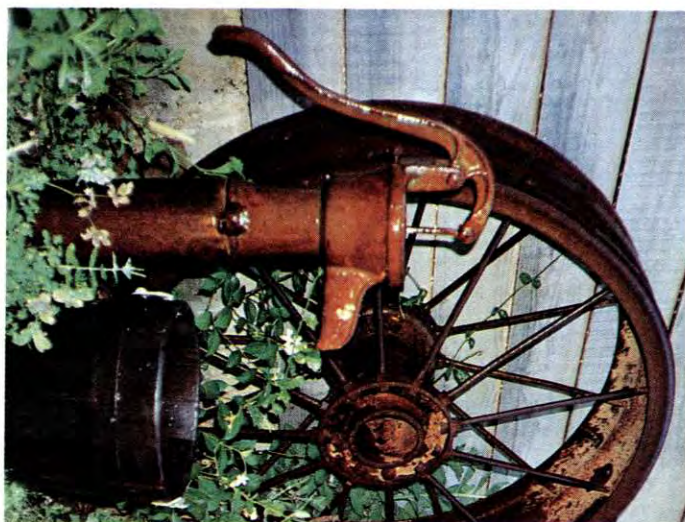


A note from



Aqua Annie

A Countywide Water District
Since 1959



AMADOR
WATER AGENCY





OUTDOOR WATER CONSERVATION TIPS

AQUA ANNIE'S TIPS FOR SAVING WATER

Conservation of water not only helps preserve our natural resources, it saves you money. Your water bill is tied directly to the amount of water you use inside and outside of your home.

Here are a few simple tips to help you save gallons of water outdoors and in your yard!

- Plant drought-resistant trees and plants.
- Put a layer of mulch around trees and plants. A layer of mulch will slow the evaporation of moisture.
- Water evenings or mornings to prevent rapid evaporation during the heat of day.
- Deep soak garden once weekly rather than sprinkle lightly several times a week.
- Use a broom to clean driveways, sidewalks, patios, pool decks and steps.
- Wash your car with bucket, sponge and a hose with a nozzle which can be shut off or adjusted to a fine spray. Soap down your car with a bucket of soapy water. Then use a hose just to rinse it off.
- Cover your swimming pool to slow down the evaporation of water from it.
- Teach your children that your hose and sprinkler are not toys.
- Check for leaks in pipes, hoses, faucets and couplings.



LANDSCAPING IDEAS



Are you looking for ways to have a beautiful yard, yet save money? The Water Agency has a water efficient demonstration garden which is designed to illustrate different varieties in form, texture and color of plants available for low water use gardening in Amador County. The plants are categorized as California natives or genres of natives which require good soil drainage and little to no water once established. The garden contains only a sampling of the many plants available for this use.

In the garden you may recognize some natives to Amador County such as Toyon, Manzanita, and Oak. Drought tolerant herbs are also featured which not only provide foliage and flower color, but many culinary uses as well. A variety of ornamental drought tolerant trees, shrubs, grasses, perennials and ground covers are illustrated throughout the display.

You are welcome to stop by the Water Agency Office on Ridge Road and view the garden. An informational plant guide is available for you to use while visiting. For more information, call us at 223-3018.



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You also pay to heat your water. If you use less hot water you will save money on your energy bills!

Bathroom Tips

- Avoid leaving the water running when shaving or brushing teeth. You can save up to 10 gallons each time you wash.
- When using the bathtub, fill it only a quarter to half full instead of all the way.
- Keep the length of showers to 5 minutes--a 5 minute shower could use up to 35 gallons.
- Don't flush toilets unnecessarily--utilize trash baskets for tissues and insects.
- Check your toilet for leaks--you could be wasting more than 100 gallons of water a day.
- Put two weighted plastic bottles in your toilet tank to reduce the amount of water used with each flush and install water-saving shower heads or flow restrictors.

Kitchen Tips

- When using a dishwasher, wash with a full load. Dishwashers use 15-25 gallons of water per cycle. Avoid pre-rinsing when possible.

- Use moderate amounts of detergent; extra detergent means extra rinsing.
- When washing dishes, don't let the tap water run freely. Fill the sink for washing and rinsing.
- Store water in the refrigerator for drinking; this eliminates the running of tap to obtain drinking water.
- Put a stopper in the sink to rinse vegetables. Don't use running tap water.

Laundry Tips

- When washing clothes, remember to wash full loads and eliminate pre-soak and extra rinsing cycles when possible. One load uses up to 50 gallons of water. You can save up to 19 gallons per load by avoiding extra rinse cycles.

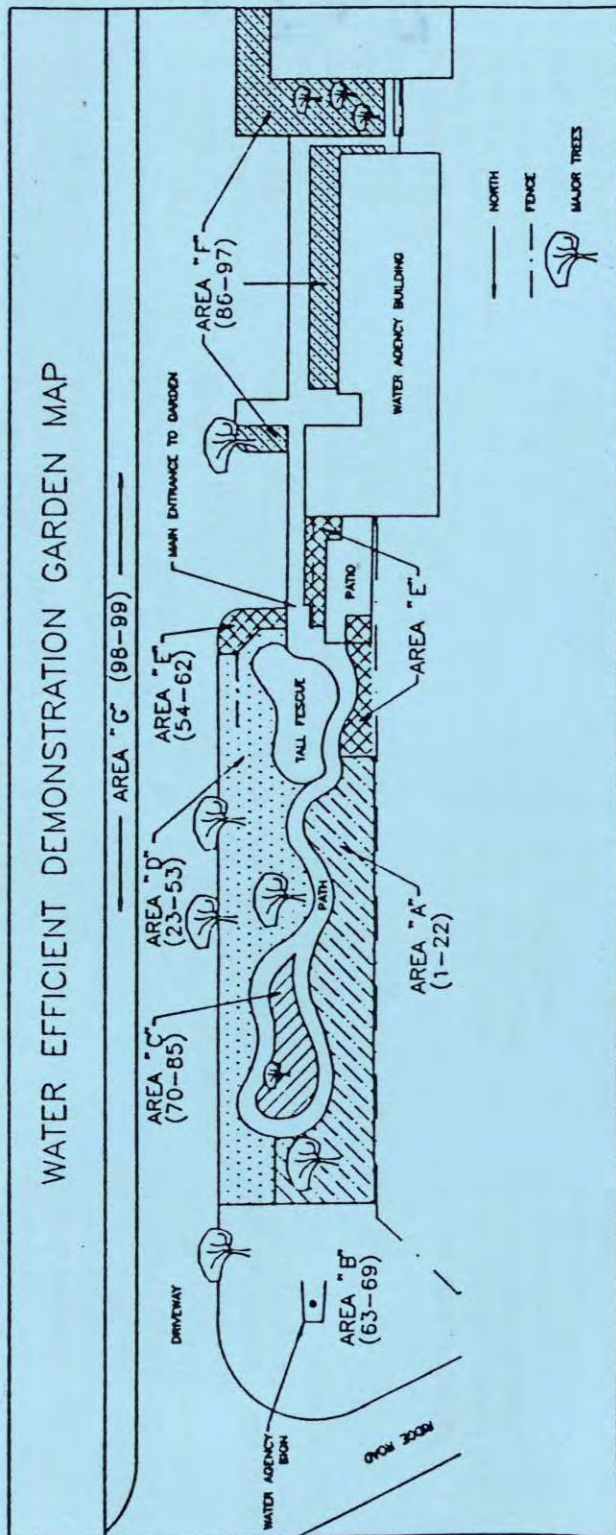
INDOOR WATER USE

75% in the Bathroom

20% in the Kitchen & Laundry

5% for Cooking & Drinking

WATER EFFICIENT DEMONSTRATION GARDEN MAP



Amador Water Agency DEMONSTRATION GARDENS

Featuring Drought Tolerant
Landscaping

INFORMATIONAL BOOKLET & PLANT GUIDE



Landscape Designer
Kathleen Lynch

WATER EFFICIENT
DEMONSTRATION GARDENS

This garden was designed to illustrate different varieties in form, texture and color of plants available for low water use gardening in Amador County. The garden contains only a sampling of the many plants available for this use. All plants and plant materials used were obtained locally.

The plants are categorized as California natives or genuses of natives which require good soil drainage and little to no water once established. You may recognize some natives to Amador County such as *Heteromeles* (Toyon), *Arctostaphylos* (Manzanita) and *Quercus* (Oak).

The island in the center of the pathway contains a sampling of the many drought tolerant herbs available for use. This selection provides not only foliage and flower color, but many culinary uses as well.

The remainder of the garden, as well as those surrounding the building, illustrates a variety of ornamental drought tolerant trees, shrubs, grasses, perennials and ground covers.

Amador County has a wide range of climates. So while these plants may be hardy here on a warm ridgetop, some may not do their best in cooler areas. Check with your local nursery for those plants that are best suited to your climate and area.

This community service garden is provided for your enjoyment and education by the Amador Water Agency through the joint volunteer efforts of the Mule Creek State Prison inmates and faculty and the Amador County Cooperative Extension Master Gardeners, in coordination with Agency personnel.

For further information regarding drought tolerant landscaping, please contact your local nursery or the University of California Cooperative Extension. Information regarding future workshops or tours conducted by the Amador County Master Gardeners can be obtained at 223-6482.

Your cooperation in helping us keep these gardens enjoyable for everyone's use by staying on the walkways and disposing of trash in the receptacle provided is very much appreciated.

Appendix C - School Educational Materials Samples

ABOUT THE WATER CYCLE



This coloring and activities
book belongs to



MY
BOOK
about

WATER



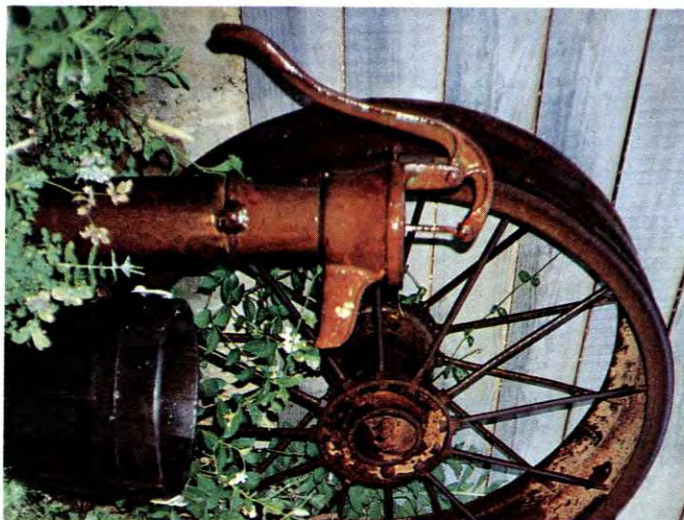
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INDOOR WATER USE

75% in the Bathroom

20% in the Kitchen & Laundry

5% for Cooking & Drinking

Appendix D - Amador Water Agency Water Rates

AMADOR WATER SYSTEM

1 unit - 748 gallons

<i>AWS Metered Treated (Routes 02 to 13)</i>	per month	per unit
5/8" Monthly Service Charge	\$ 25.13	\$ 1.89
Meter set fee (5/8" meter)	\$ 375.00	
Participation fee (5/8" meter) (Treated Retail)	\$ 11,000.00	
48 Hour Late Notice Charge	\$ 10.00	

These are the rates for a typical 5/8" residential connection.

<i>AWS Flat Rate Treated (Routes 09 - 13)</i>	per month	
Monthly Service Charge(7,000 sq.ft or less)	\$ 76.71	
7,001 to 16,000 sq.ft	\$ 89.95	
16,001 to 25,000 sq.ft	\$ 202.58	
Additional dwelling unit	\$ 44.04	
Participation fee (5/8" meter) (Treated Retail)	\$ 11,000.00	
48 Hour Late Notice Charge	\$ 10.00	

Call the office for any meter connection larger than 5/8"

<i>AWS Metered Untreated (Route 01,08,10)</i>	per month	per unit
5/8" Monthly Service Charge	\$ 19.56	\$ 0.52
Meter set fee (5/8" meter)	\$ 375.00	
Participation Fee	\$ 3,135.00	
48 Hour Late Notice Charge	\$ 10.00	

<i>AWS Flat Rate Untreated (Route 01,08,10)</i>	per month	
Monthly Service Charge (7,000 sq.ft or less)	\$ 36.84	
7,001 to 16,000 sq.ft	\$ 40.48	
16,001 to 25,000 sq.ft	\$ 61.49	
Additional Dwelling Unit	\$ 24.77	
48 Hour Late Notice Charge	\$ 10.00	

Effective 07/22/10 Subject to change

[Back to Top](#)**Water Agency Improvement Districts**

1 unit - 748 gallons

CAWP Retail (Routes 15 - 25)	bi-monthly	per unit	
5/8" Monthly Residential & Commercial Service	\$ 67.50		
Residential - 1 -20 units units		\$ 2.08	These are the rates for a typical 5/8' residential connection.
21 & more units		\$ 3.12	
Non-Residential Commodity rates - All		\$ 2.49	
Meter set fee (5/8" meter)	\$ 375.00		
48 Hour Late Notice Charge	\$ 10.00		
Annual Standby Assessment (July)	\$ 70.00		
	per year		
CAWP Wholesale Annexation Fee (5/8" meter)	\$ 5,610.00		Call the office for any meter connection larger than 5/8"
CAWP Retail Participation Fee (5/8" meter)	\$ 3,715.00		
ID #3 La Mel Heights (Route 14)	bi-monthly	per unit	
5/8" Monthly Service Charge	\$ 80.00		
1-100 Units		\$ 1.65	
101 + Units		\$ 2.45	
Annual Assessment \$180.00	\$ 30.00		
Meter set fee (5/8" meter)	\$ 375.00		
48 Hour Late Notice Charge	\$ 10.00		
ID#3 La Mel Grand Estates Annexation	\$ 3,815.00		
Water ID No. 7 (Routes 33 & 37)	bi-monthly		
Bi-Monthly Base & User Rate (18 units incl)	\$ 47.50		
Residential - 1-50 units		\$ 1.16	
51 and over units		\$ 1.94	
Annual Non-metered charge	\$ 100.00		
Connection Charge/per unit of use	\$ 4,170.00		
Equalization Fee/per unit of use	\$ 8,005.00		
Meter Set Fee (5/8")	\$ 375.00		
48 Hour Late Notice Charge	\$ 10.00		

Effective 07/01/10 Subject to change

[Back to Top](#)**WASTEWATER SYSTEMS**

Effective 07/01/10 Subject to change

Eagle's Nest - WW ID No. 2	Standby	User Rate
Monthly Service Charge	\$ 30.00	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00
Surrey Junction - WW ID No. 3	Standby	User Rate
Monthly Service Charge	\$ 27.00	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00
Wildwood - WW ID No. 4	Standby	User Rate

Monthly Service Charge	\$ 21.00	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Gayla Manor - WW ID No. 5</i>	Standby	User Rate
Monthly Service Charge	\$ 34.00	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Jackson Pines - WW ID No. 6</i>	Standby	User Rate
Monthly Service Charge	\$ 39.60	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Fairway Pines - WW ID No. 7</i>	Standby	User Rate
Monthly Service Charge	\$ 39.60	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Pine Grove - WW ID No. 8</i>	Standby	User Rate
Monthly Service Charge	\$ 27.73	\$ 101.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Viewpoint - WW ID No. 9</i>	Standby	User Rate
Monthly Service Charge	\$ 39.60	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Tiger Creek Estates - WW ID No. 10</i>	Standby	User Rate
Monthly Service Charge	\$ 32.56	\$ 86.55
Sewer Permit/Inspection Fee	\$ 350.00	\$ 350.00
48 Hour Late Notice Charge	\$ 10.00	\$ 10.00

<i>Lake Camanche - WW ID No. 11</i>	Standby	User Rate
Monthly Service Charge (with water meter)	\$ 10.00	\$ 94.20
-without water meter	\$ 5.00	
Special Facility Fee/per unit of use	\$ 5,535.00	
Special Facility Fee/each additional unit of use	\$ 6,260.00	
Facility Expansion Charge	\$ 18,880.00	
Sewer Permit Fee	\$ 350.00	
48 Hour Late Notice Charge	\$ 10.00	

<i>Martell - WW ID No. 12</i>	Standby	User Rate
Monthly Residential User Rate		\$ 64.39
Monthly Commercial User Rate (EDU's based on water use)		Contact Office
Equalization Charge/per unit of use	\$ 9,635.00	
Sewer Permit Fee:	\$ 350.00	
48 Hour Late Notice Charge:	\$ 10.00	

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**Appendix E - Amador Water Agency Water Shortage
Ordinance**

these devices, and shall inspect them for water tightness and reliability at least once per year in accordance with the regulations of the California State Department of Health Services. Such inspection documentation must be provided to the Agency annually. The Agency may require more frequent inspections if, upon inspection, the device fails, or where it has been determined that the hazard justifies more frequent testing and/or inspections. (Revised March 11, 2004 - Resolution No. 2004-16)

- (e) Double-check valves and other protective devices may be inspected and tested for water tightness by the Agency when it is suspected that the device may not be operating properly or the owner has not provided proof of compliance with this Section. If the inspection cannot be made without undue difficulty because of an obstruction or other interference, the customer will be notified and requested to either correct the condition or have the inspection made at his own expense and witnessed by the Agency. The Agency shall bill the owner for its costs for such inspection which bill shall be paid within thirty (30) days after its date. Interest shall accrue at the legal rate on any delinquent amount.
- (f) Service to any premises may be discontinued if it is found that dangerous or unprotected cross-connections exist, or if any defect is found in the check valves or other protective devices. Service shall not be restored until such defects are corrected at the customer's expense and applicable Agency service restoration charges have been paid as set forth in Rate Schedule UN-3(c). (Revised March 11, 2004 - Resolution No. 2004-16)
- (g) Inspection and testing shall be performed by a State certified backflow prevention device inspector. A list of certified inspectors will be made available to the owner by the Agency.

Section 2.18 Prevention of Ground Wire Attachments.

The Agency is not responsible for providing an electrical ground through water service equipment. Accordingly, customers are cautioned not to attach any ground wiring to plumbing which is or may be connected to Agency service equipment. The customer shall be liable for any damage to Agency property resulting from a ground wire attachment.

Section 2.19 Voluntary Water Conservation.

The Agency promotes an ongoing voluntary water conservation program in order to ensure that water resources available to the Agency are put to a reasonable beneficial use and that the benefits of the Agency's water supply and service extend to the largest number of persons. Each customer of the Agency is urged to install devices to reduce the quantity of water to flush toilets and to reduce the flow rate of

showers. Each customer is further urged to adopt such other water use and reuse practices and procedures as are feasible and reasonable. The Agency, at its sole discretion, may make available, for use in each residence receiving water service from the Agency, a water saving kit containing the following:

1. A device(s) for reducing toilet flush water requirements;
2. A device(s) for reducing shower flow rates;
3. A dye tablet or tablets for determining if a toilet tank leaks;
4. Other water conservation devices approved by the Agency from time to time; and
5. Other instruction and device installation information pertinent to conservation of water.

Section 2.20 Mandatory Water Conservation.

In order to conserve the Agency's water supply during a drought or other emergency for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection, the following regulations and restrictions on the delivery and use of water from the Agency shall take effect upon a declaration of a drought or other emergency by the Board or its designee:

Residential, Commercial and Public Authority Customers.

All customers shall reduce consumption by that percentage amount stated in the Board's drought or emergency declaration. Where appropriate, achievement of percentage reductions shall be determined by the Agency by comparing the customer's prior year's seasonal usage with the seasonal usage during the year of the drought or other emergency. In order to reduce consumption to the appropriate levels, the Board may determine in its drought or emergency declaration that customers shall comply with the following:

1. Discontinue watering lawns and gardens or any other irrigation between the hours of 9:00 a.m. and 7:00 p.m. In addition, the watering of lawns and gardens or any other irrigation which results in gutter, patio, driveway, walk or street flooding or other run-off shall be prohibited. Unattended watering shall be prohibited.
2. Washing of cars, boats, trailers or other vehicles by a hose without an automatic shut-off valve or by use of water directly from faucets or other outlets shall be prohibited.
3. The emptying and refilling of existing indoor and outdoor swimming pools and hot tubs shall be discontinued.
4. There shall be no washing of sidewalks, walkways, driveways, patios, parking lots, tennis courts or other hard-surfaced areas

by hose or by use of water directly from faucets or other outlets.

5. Customers shall utilize water conservation kits that may be distributed by the Agency or other water utilities.
6. Applications for service connections for new construction shall be granted upon condition that water shall be used for only interior purposes and shall not be used for lawn or garden watering or any other irrigation use for the duration of the drought or emergency.
7. Operation of decorative fountains shall be prohibited.
8. Sewer flushing with fresh water shall be prohibited.
9. Restaurants shall serve water to customers only upon request.
10. The use of water for scenic and recreational ponds and lakes, except for the minimum amount required to support fish life, shall be prohibited.

Industrial Customers.

Industrial customers shall reduce water use to the lowest possible amount that will allow continued operation. Conservation measures to be taken shall be reviewed on an individual basis; and reductions in consumption shall be established on an individual basis.

Canal and Ditch Customers.

All customers shall observe the above rules where appropriate and consistent with the Board's drought or emergency declaration, the following additional rules:

1. All irrigation service customers entitled to take one miner's inch of water constant flow shall be limited to one-half miner's inch. Customers entitled to take one-half miner's inch shall be limited to one-fourth miner's inch.
2. All irrigation service and other customers using more than one miner's inch shall reduce their consumption of water by 50 percent.
3. All customer receiving tanks shall be float-controlled; and receiving tanks and other facilities, including but not limited to pipes, shall be in proper condition to eliminate leakage and waste of water.

4. Water deliveries to resale customers serving metered accounts and water deliveries to resale customers serving unmetered accounts shall be reduced by those percentages stated in the Board's declaration of drought or other emergency.
5. In reducing water consumption, customers shall use irrigation practices that conserve water.
6. During the term of mandatory water conservation requirements, new applications for only irrigation water service shall be denied.
7. All new service applications for ditch water intended to be treated by the customer and used for domestic purposes shall be metered.

Enforcement.

Violations of mandatory water conservation requirements shall result in the following enforcement measures :

1. First violation: written warning that a further violation will result in possible water restrictions.
2. Second violation: Agency shall restrict customer's water service by inserting a device to reduce the customer water flow by the required reduction; and such restriction shall be removed only after a one-week period has elapsed, and upon payment by the customer to Agency of the applicable Service Call Fee.
3. Third violation: Agency shall restrict the customer's water service by inserting a device to reduce the customer's water flow by the required reduction; and said device shall remain in place for the duration of the drought or emergency. Prior to removal of the device the customer shall pay to the Agency the applicable Service Call Fee.

Variances.

Variances may be granted from any of the above regulations and restrictions upon application in writing stating in detail the reason therefor.

Section 2.21 Control Valve.

The customer shall install a suitable valve as close to the meter box location as practicable, the operation of which shall control the entire water supply from the service. When any customer service pipe is being replaced, such control valve shall be installed by the owner of the property at his expense if such is not already

